Cisco TelePresence System 3000 Assembly Guide Use & Care Guide Field-Replaceable Unit Guide

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Cisco TelePresence System 3000
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Preface

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Introduction

The *Cisco TelePresence 3000 Assembly Guide* outlines the steps and best practices for assembling and installing the Cisco TelePresence 3000.

This guide is intended primarily for installers of the Cisco TelePresence System 3200. Site planners, network administrators, and facility maintenance personnel may also find this document useful.

This preface provides the following information for using this guide and for accessing other resources.

- Conventions, page ix
- Obtaining Documentation, Obtaining Support, and Security Guidelines, page x
- Related Documentation, page x

Conventions

This document uses the following conventions to convey information and alert the user to conditions requiring special awareness.

Warning **This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, you must be aware of the hazards involved with electrical circuitry and familiar with standard practices for preventing accidents.**

Caution Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Note Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Tip Means *the information contains useful tips.*

Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.

Related Documentation

The Cisco TelePresence system documentation set includes a variety of online and printed guides designed to aid the assemblers, installers, system administrators, and users in the setup, configuration, administration, and use of the Cisco TelePresence. These documents include:

- *Cisco TelePresence System 1000 Assembly, Use & Care, and Field Replacement Unit Guide*, OL-16247-01. There is also a pointer document for this guide, OL-17800-02
- *Cisco TelePresence and Cisco Unified Communications Manager Installation and Configuration Guide*, OL-11326-02
- *Cisco TelePresence System Release 1.4 Administrator's Guide*, OL-13676-03
- *Release Notes for Cisco TelePresence System, Release 1.4*, OL-12074-05
- *Cisco TelePresence Meeting User's Guide*, 78-17791-01
- *Cisco TelePresence System Release 1.4 Meeting Quick Reference*, 78-17792-02

All of these documents are available at the Cisco documentation website.

CHAPTER 1

Overview

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Chapter Organization

Chapter 1, "Overview" (this chapter)

Provides chapter organization and content of this document and includes an overview of the assembly steps you perform.

Chapter 2, "Building the Display Assembly"

- The steps for assembling the three Display structures, connecting them, and positioning them in the conference room are described in a series of illustrations.
- Each illustration builds upon the previous illustration to describe the complete process of building the Display assembly.
- Each illustration is keyed numerically to the Chapter Parts List, appearing at the beginning of the chapter. You can refer to the Parts List to identify the specific fastener or bracket being used in an illustration.
- Additional information may appear below each illustration.

Chapter 3, "Mounting and Leveling the Plasma Displays"

- This chapter uses illustrations to describe the leveling alignment points and the processes used to level the plasma displays.

Chapter 4, "Building the Lighting Assembly"

- This chapter is organized the same as Chapter 2.

Chapter 5, "Building the Display Shelf Assembly"

- This chapter is organized the same as Chapter 2.

Chapter 6, "Building the Table Assembly"

- This chapter is organized the same as Chapter 2.

Chapter 7, "Assembling the Remaining Cisco TelePresence Elements"

- This chapter is organized the same as Chapter 2.
- Each element has a Parts List at the beginning of the chapter.

- Each element is described using one or more illustrations. The elements are:
  - **Camera assembly** - attaches to the center Display structure
  - **Microphone assembly** - attach to the three table segments
  - **Table Leg Wiring assembly** - wired for power and network connectivity
  - **Projector assembly** - attaches to the underside of the center table segment
  - **Privacy Panel assembly** - attach to the table segments
  - **Codec assembly** - attach to each Display structure
  - **Speaker assembly** - attach to the underside of the Display shelf
  - **Projector Screen assembly** - attaches to the underside of the Display shelf
  - **Cisco IP Phone 7975G**
  - **Camera Target assembly** - used for camera focus and alignment

Chapter 8, "Routing Power and Signal Cables"

- A series of illustrations are used to describe the routing and connection of all power and signal cables.
- Illustrations show you the routing path to take for all cables.
- Illustrations showing cables terminating in a Codec include a close-up of the Codec.
- A pointer to the first-time setup information.

Chapter 10, "Use & Care Guide"

- This chapter provides information on maintaining several elements of the Cisco TelePresence System 3200, including the tabletop and plasma displays.

Chapter 11, "Field-Replaceable Unit Guide"

- This chapter describes removal and replacement processes for various elements of the Cisco TelePresence System 3200.

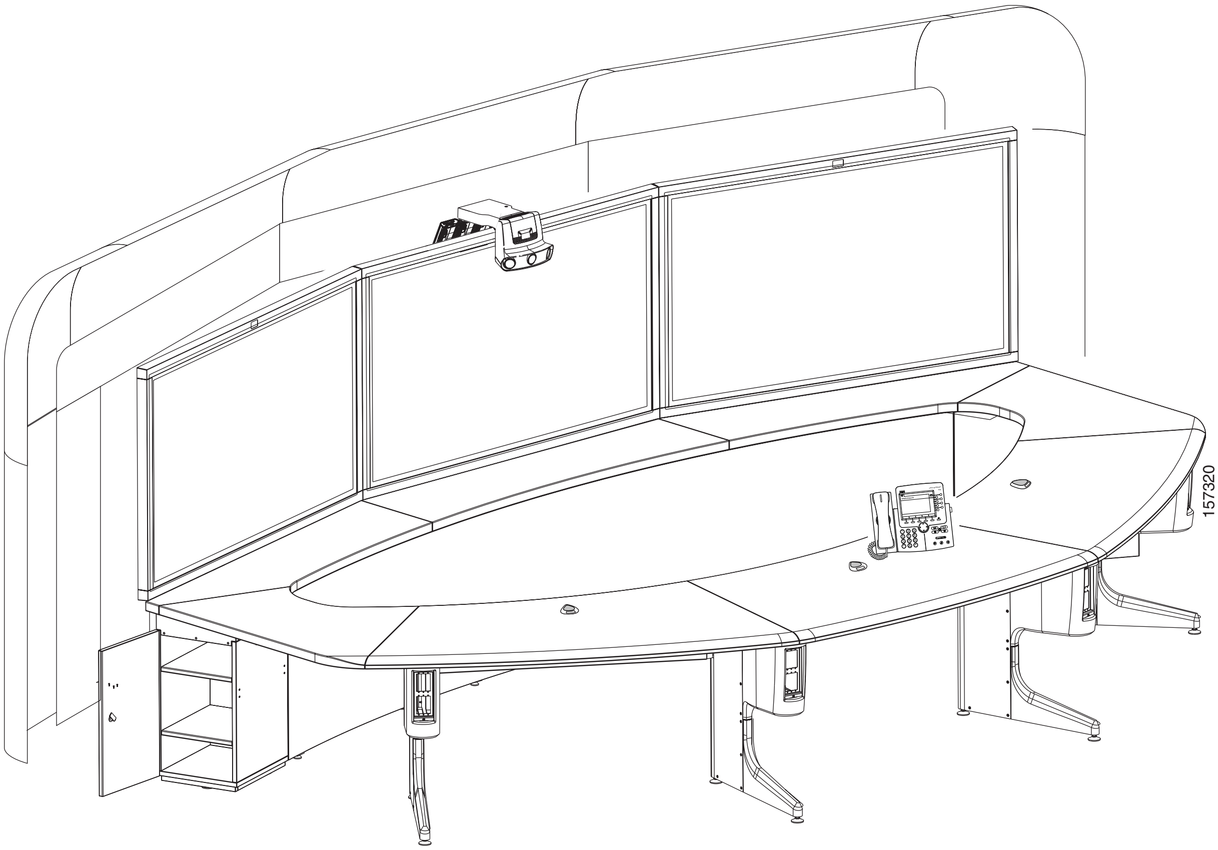
Appendix A: Parts List Sorted by Carton

- This appendix lists all parts included in the individual chapter parts lists, and sorts the list by carton.

Appendix B: Region- and Country-Specific Equipment

- This appendix lists the part numbers for all region- and country-specific equipment, including table leg wiring and power cords.

Figure 1-1 View of an Assembled Cisco TelePresence System 3200



Assembly Overview

Perform the following steps to install a CTS 3000:

Step 1 Build the display assembly. See Chapter 2, "Building the Display Assembly" for more information.

Step 2 Mount and level the plasma displays. See Chapter 3, "Mounting and Leveling the Plasma Displays" for more information.

Step 3 Build the lighting assembly. See Chapter 4, "Building the Lighting Assembly" for more information.

Step 4 Build the display shelf assembly. See Chapter 5, "Building the Display Shelf Assembly" for more information.

Step 5 Build the table assembly, excepting the privacy panels, by completing the following steps:

  a. Install the table. See Chapter 6, "Building the Table Assembly" for more information.

  b. Install and connect the microphones. See Step 2 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" to install the microphones and Step 5 in Chapter 8, "Routing Power and Signal Cables" to connect the microphones.

c. Install the I/O Modules for the table leg power and Ethernet connections and connect the Ethernet cables. See Step 3 and Step 4 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" to install the I/O modules and cables and Step 5 in Chapter 8, "Routing Power and Signal Cables" to connect the Ethernet cables.

Step 6 Install the codecs and connect the signal cables. See Step 12 through Step 14 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" to install the codecs and Step 10 and Step 12 in Chapter 8, "Routing Power and Signal Cables" to connect the signal cables between the codecs and plasma displays.

Step 7 If you ordered a presentation codec, install this codec. Refer to the *Cisco TelePresence Hardware Options and Upgrade Guide* for more information.

Step 8 Install and connect the camera assembly. See Step 1 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" to install the camera assembly and Step 11 in Chapter 8, "Routing Power and Signal Cables" to connect the camera cables.

Step 9 Install and connect the PDUs. See Step 1 through Step 3 in Chapter 8, "Routing Power and Signal Cables" to install the PDUs and Step 4 in Chapter 8, "Routing Power and Signal Cables" to connect the cables.

Step 10 Connect the projector to the projector bracket, and connect the projector and bracket to the table assembly. See Step 5 and Step 6 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" to connect the projector to the table assembly and Step 4 in Chapter 8, "Routing Power and Signal Cables" to connect the cables.

Step 11 Place the Cisco Unified IP Phone on the table and connect the phone cable. See Step 5 in Chapter 8, "Routing Power and Signal Cables" to connect the cable.

Step 12 Install the privacy panels. See Step 9 through Step 11 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements."

Step 13 Install the speaker boards and speakers. See Step 16 through Step 18 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements."

Step 14 Install the projector screen. Refer to the projector screen installation guide that is packaged with the assembly.

Step 15 Connect the power cables for the codecs, lighting and table leg power connections by completing Step 4 in Chapter 8, "Routing Power and Signal Cables."

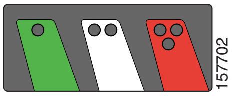
Step 16 Assemble the camera targets by completing Step 21 in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements."

Step 17 Perform first-time setup using the instructions in Chapter 9, "First-Time Setup."

Conventions and Terminology

- The directions *left* and *right* in this guide are synonymous with *participant's left* and *participant's right*. They refer to the assembly as you face the Plasma displays.
- Cable connections to the Codecs are labeled with a color-coded symbol system.
  - A single dot on a green background indicates a **center** element.
  - Two dots on a white background indicate a **left** element.
  - Three dots on a red background indicate a **right** element.

Figure 1-2 Cable Connection Labeling System



Tools and Equipment List

To assemble the Cisco TelePresence 3000, you need the following tools and equipment:

Uncrating and Unpacking:

- Claw hammer or small pry bar
- Large Phillips screwdriver
- Tin snips*
- Pallet jack or hand cart (for moving component boxes to installation site)*
- Safety gloves*
- Safety glasses*
- Box cutters*

Cisco TelePresence System 3200 Structure, Accessory, and Adjustment Assembly:

- Power screwdriver with 3, 4, 5, and 6 mm (standard or round) Allen bits, or standard 3, 4, 5, and 6 mm Allen wrenches

Tip A round-head Allen bit can work at an angle instead of just straight out, a helpful feature in tight spots.

- Manual screwdrivers, #2 and #4 Phillips and flathead types
- Metric wrenches, 10 to 15 mm
- 9/64-inch Allen wrench (included with speakers)
- Tape measure
- Level
- Masking tape*
- Tie wraps*
- Knee pads or kneeling cushion*
- Laptop computer attached to network (for troubleshooting or reference)*
- Hand vacuum or facilities vacuum*
- Stepladder*
- Mechanical lift (optional, for hanging display screens)

* Recommended for best results

CHAPTER 2

Building the Display Assembly

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
1	Display structure	700-23358-xx	3	35, 36, 37 (CTS3K-FUR-MAPLE) 32, 33, 34 (CTS3K-M)	
2	Rear foot stabilizer	700-23360-xx	6	17	
3	Front foot stabilizer	700-23359-xx	6	14, 15, 16	
4	Leveling foot	51-4540-xx	12	1	
5	Display shelf support left	700-23339-xx	3	40 (CTS3K-FUR-MAPLE) 39 (CTS3K-M)	
6	Display shelf support right	700-23340-xx	3	40 (CTS3K-FUR-MAPLE) 39 (CTS3K-M)	
7	Display tilt bracket	700-23363-xx	6	12	
8	Codec safety tray	700-23341-xx	3	40 (CTS3K-FUR-MAPLE) 39 (CTS3K-M)	
9	Camera assembly bracket	700-23346-xx	1	11	For center display structure only
10	Support crossbars	700-23361-xx	4	33 (CTS3K-FUR-MAPLE) 30 (CTS3K-M)	
11	M8 x 70 mm screws	48-2274-xx		1	
12	M8 washers	49-1165-xx		1	
13	M8 x 20 mm screws	48-2273-xx		1	

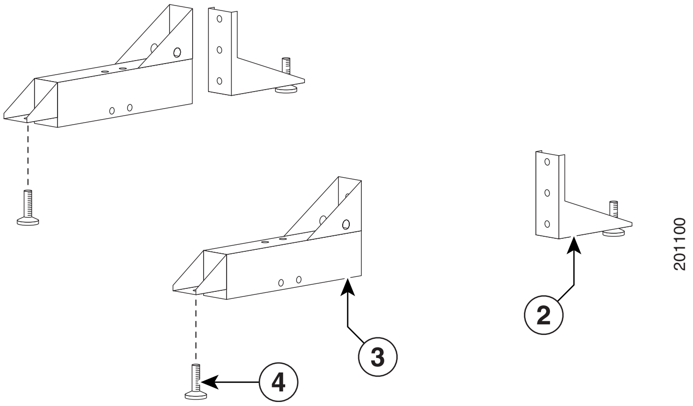
Caution The display structures are unstable during assembly. Use caution, and support all structures as required.

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Note The directions *left* and *right* refer to the assembly as you face the Plasma displays.

Step 1 Attach the Leveling feet to the Rear and Front Foot stabilizers.

Figure 2-1 Leveling feet

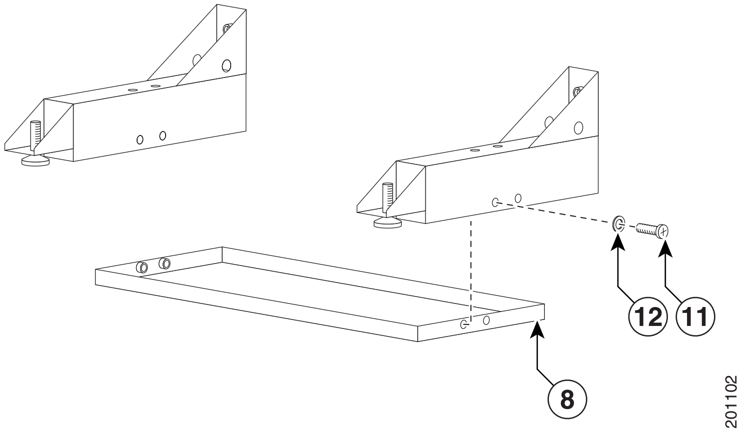


Note The structure becomes heavier and more difficult to move during the building process. Figure 2-9 shows the correct positioning of the display structure; keep this in mind as you build the structure.

Step 2 Attach the Codec Safety trays to the Front Foot stabilizers.

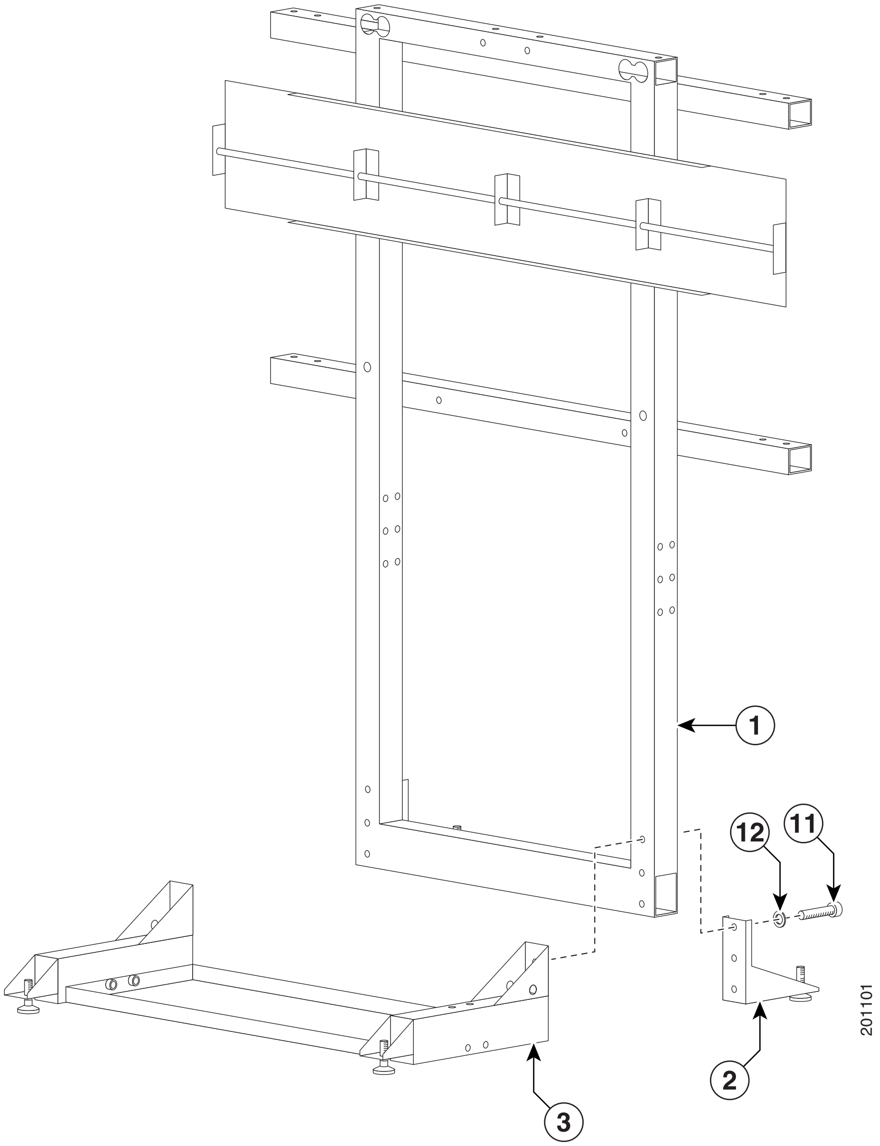
Note If you ordered a Presentation Codec, attach the larger tray that comes with the Presentation Codec package, part no. 700-25301-xx, in the center display. Refer to the *Cisco TelePresence Hardware Options and Upgrade Guide* for more information.

Figure 2-2 Codec Safety trays



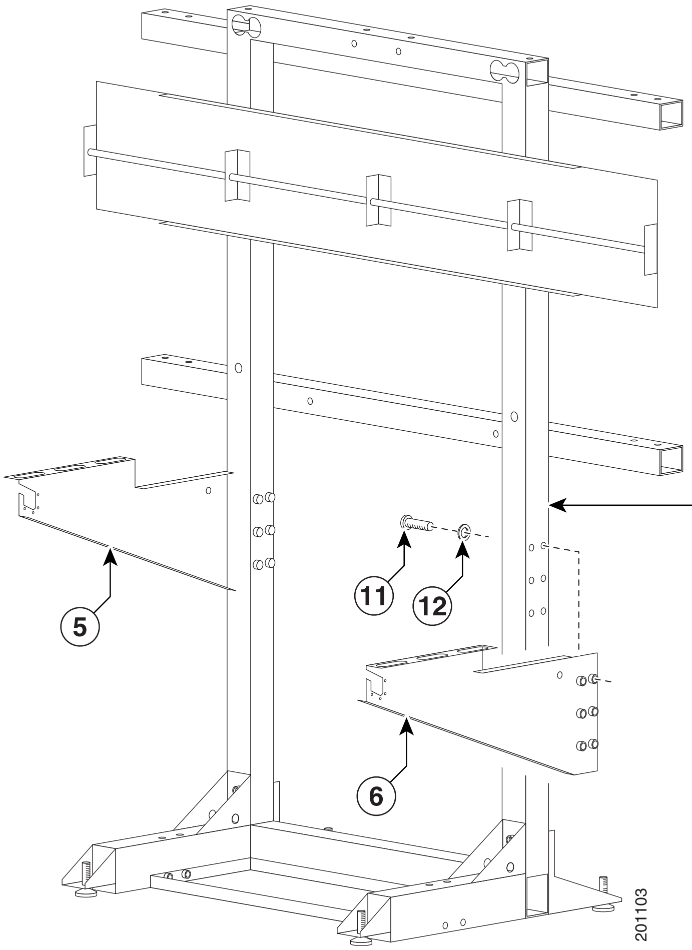
Step 3 Attach the Rear and Front Foot stabilizers to the Display structures.

Figure 2-3 Rear and Front Foot stabilizers



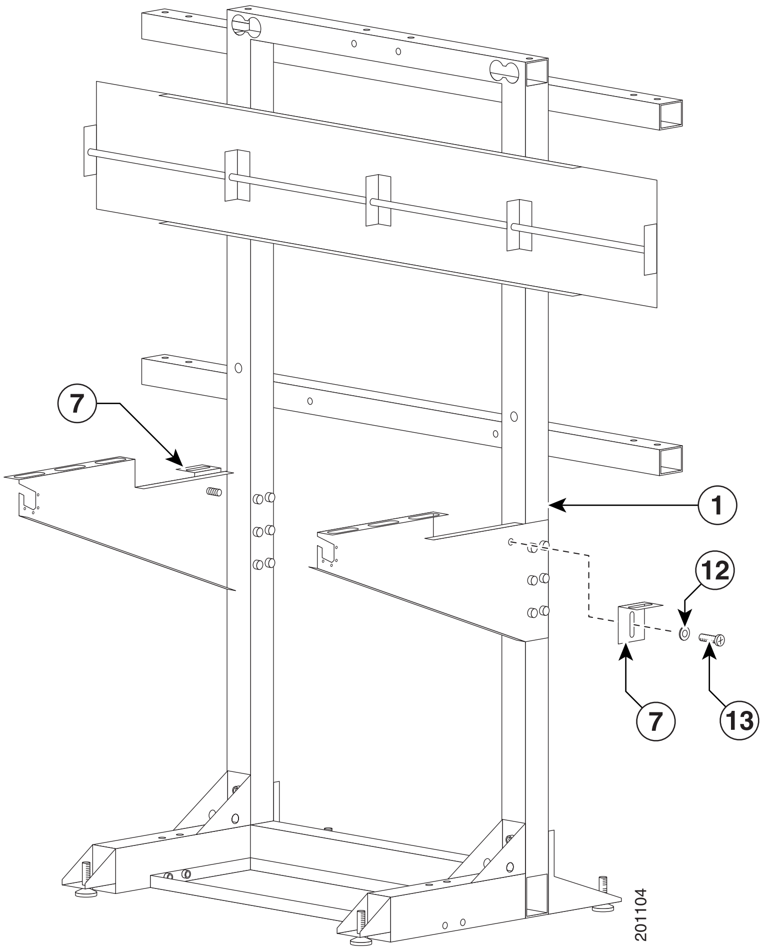
Step 4 Attach the left and right Display Shelf supports to each Display structure.

Figure 2-4 Left and Right Display Shelf supports



Step 5 Attach the Display Tilt brackets to each Display structure.

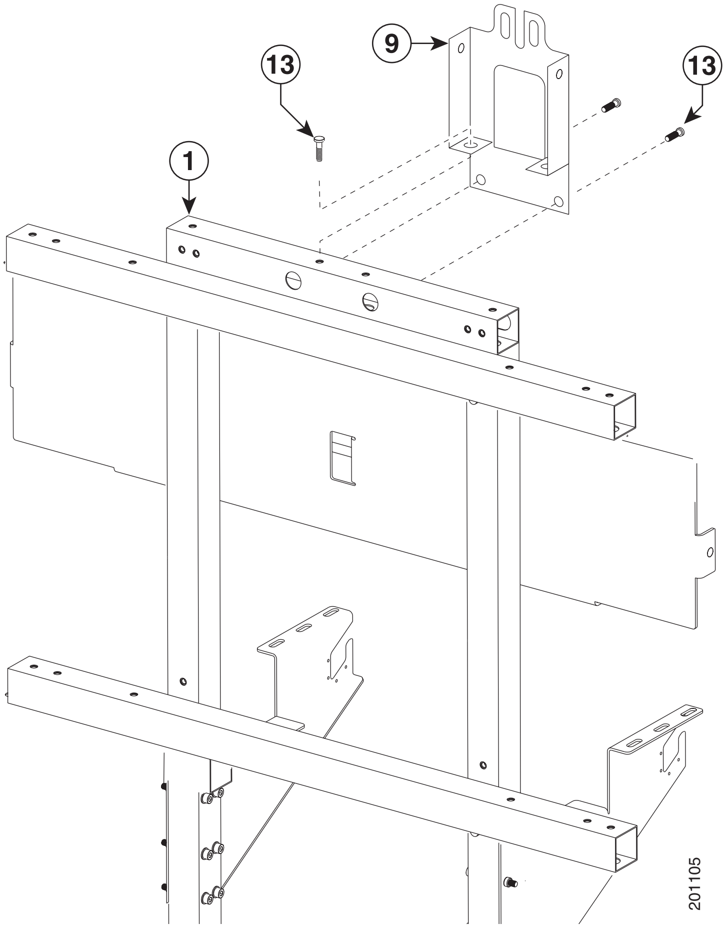
Figure 2-5 Display Tilt brackets



Note Do not tighten the Display Tilt brackets. You will need to adjust them to level the Plasma displays in Chapter 3, "Mounting and Leveling the Plasma Displays."

Step 6 Attach the Camera Assembly bracket to the center Display structure.

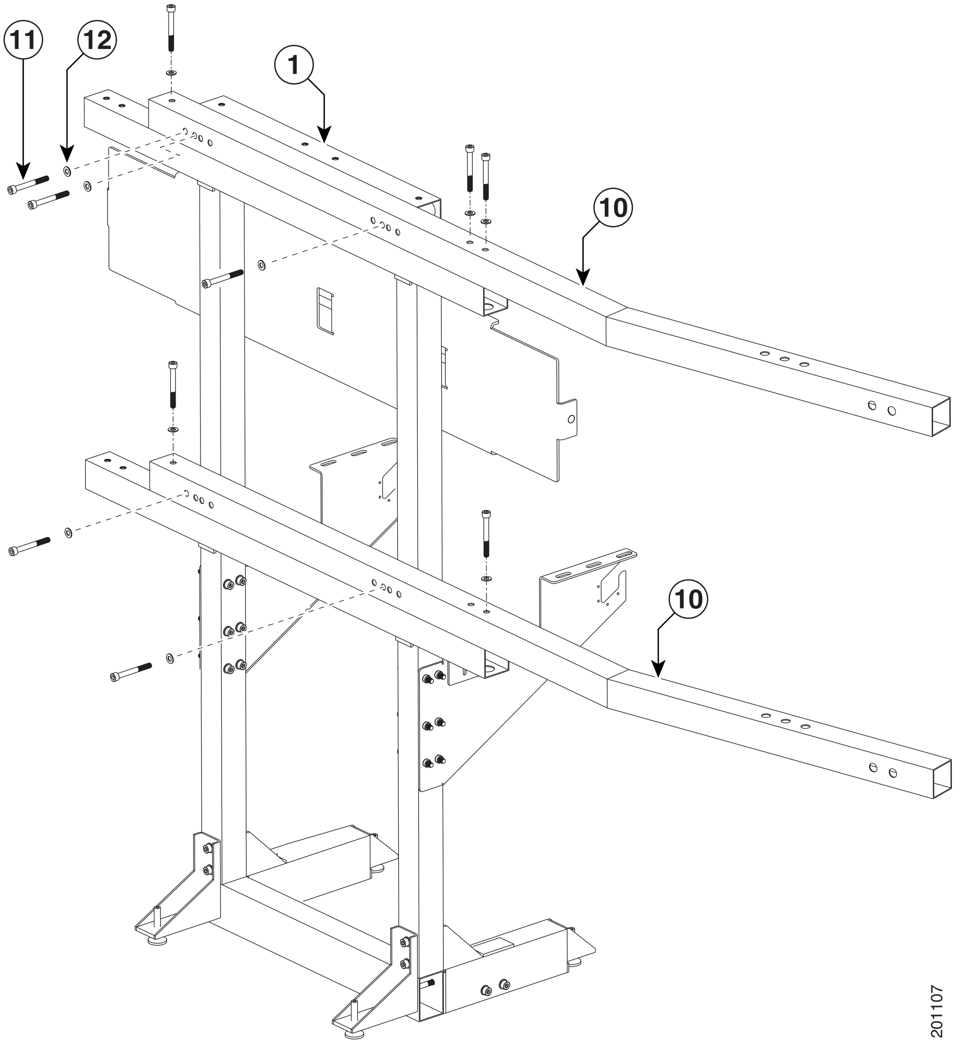
Figure 2-6 Camera Assembly bracket



Note The Camera Assembly bracket attaches to the center Display structure.

Step 7 Attach the upper and lower Support crossbars to the left and right Display structures.

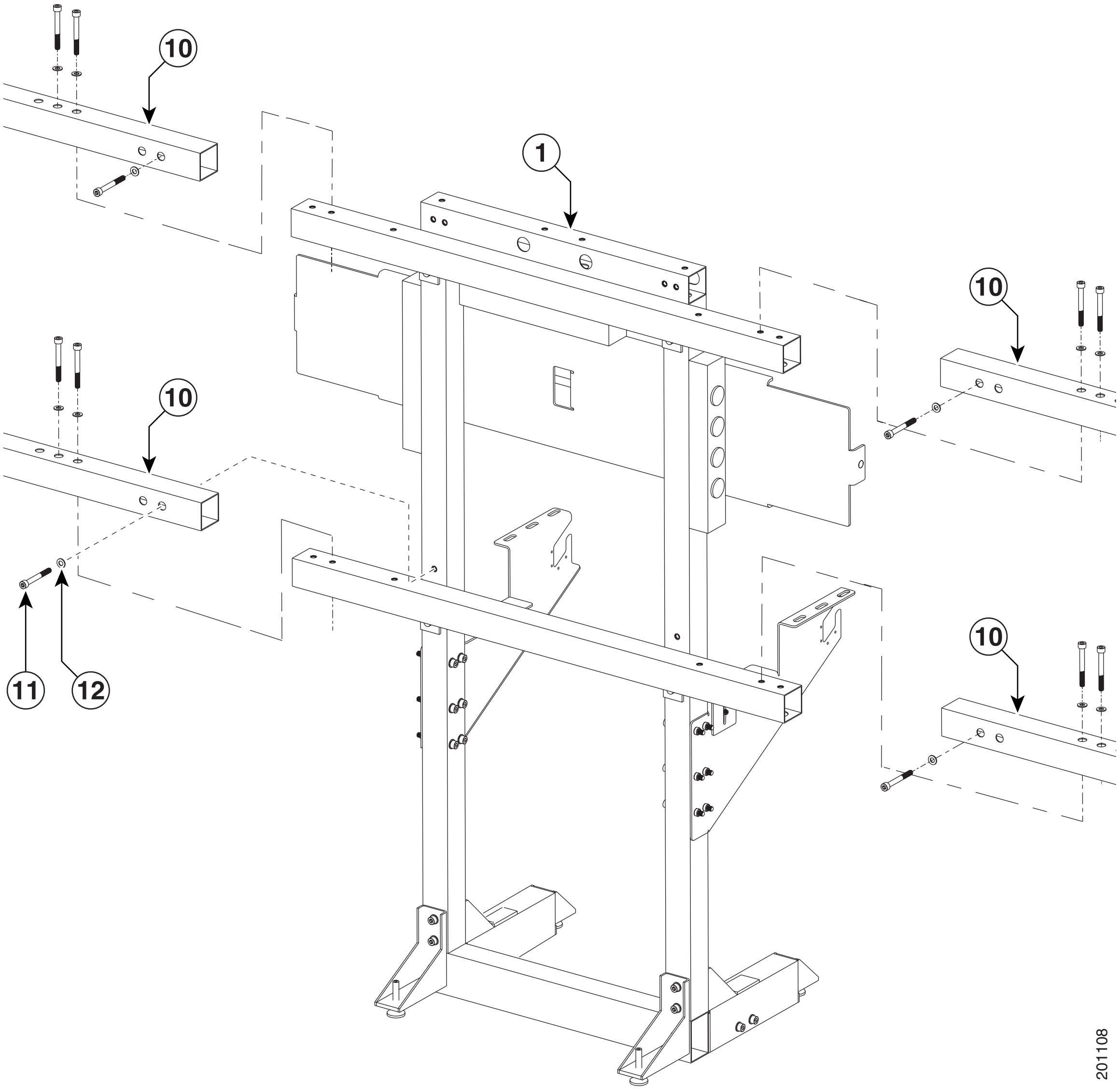
Figure 2-7 Upper and Lower Support crossbars



Tip Use the screw holes nearest the ends of the Support crossbars.

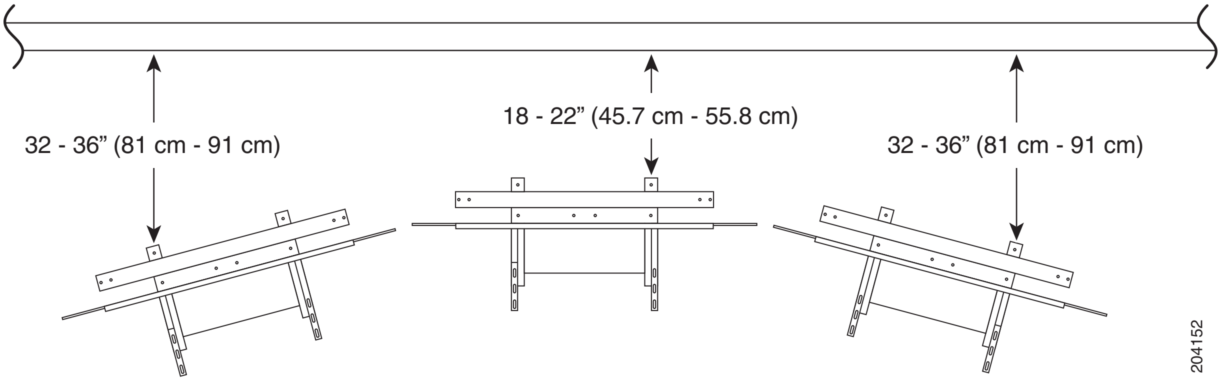
Step 8 Attach the upper and lower Support crossbars to the center Display structure.

Figure 2-8 Upper and Lower Support crossbars



Step 9 Position the three Display structures relative to the rear wall.

Figure 2-9 ***Positioning the Display Structures***


32 - 36" (81 cm - 91 cm)
18 - 22" (45.7 cm - 55.8 cm)
32 - 36" (81 cm - 91 cm)
204152

CHAPTER 3

Mounting and Leveling the Plasma Displays

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
1	65-inch high-definition display	74-4881-03	3	20, 21, 22	
2	Black buffer strips	700-23981-xx	2	1	
3	Display shelves	700-23600-xx, 700-23599-xx, 700-23598-xx (CTS3K-FUR-MAPLE) 700-23339-xx, 700-23340-xx, 700-23341-xx (CTS3K-M)	3	46 (CTS3K-FUR-MAPLE) 44 (CTS3K-M)	The Display shelves are used in this chapter for leveling purposes only. The Display shelves and the attaching bracketing hardware are described in Chapter 5, Building the Display Shelf Assembly.
4	M8 x 20 mm screws	48-2273-xx		1	

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

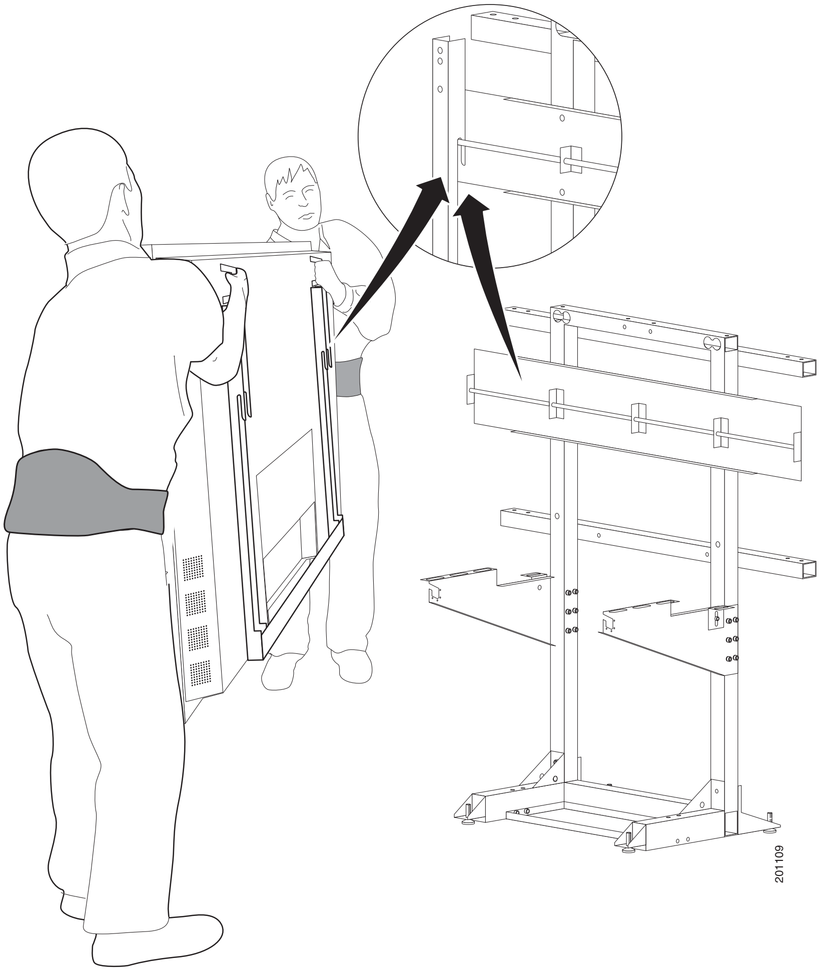
Note The directions *left* and *right* refer to the assembly as you face the Plasma displays.

Note Figure 3-3 through Figure 3-8 illustrate the process of leveling the Plasma displays. You may want to review all of Chapter 3 before beginning the leveling process.

Step 1 Hang the left, center, and right Plasma displays on the Display structure crossbars

Caution Make sure the Plasma display Leveling feet remain firmly seated on top of the Display shelf supports.

Figure 3-1 The left, center, and right Plasma displays



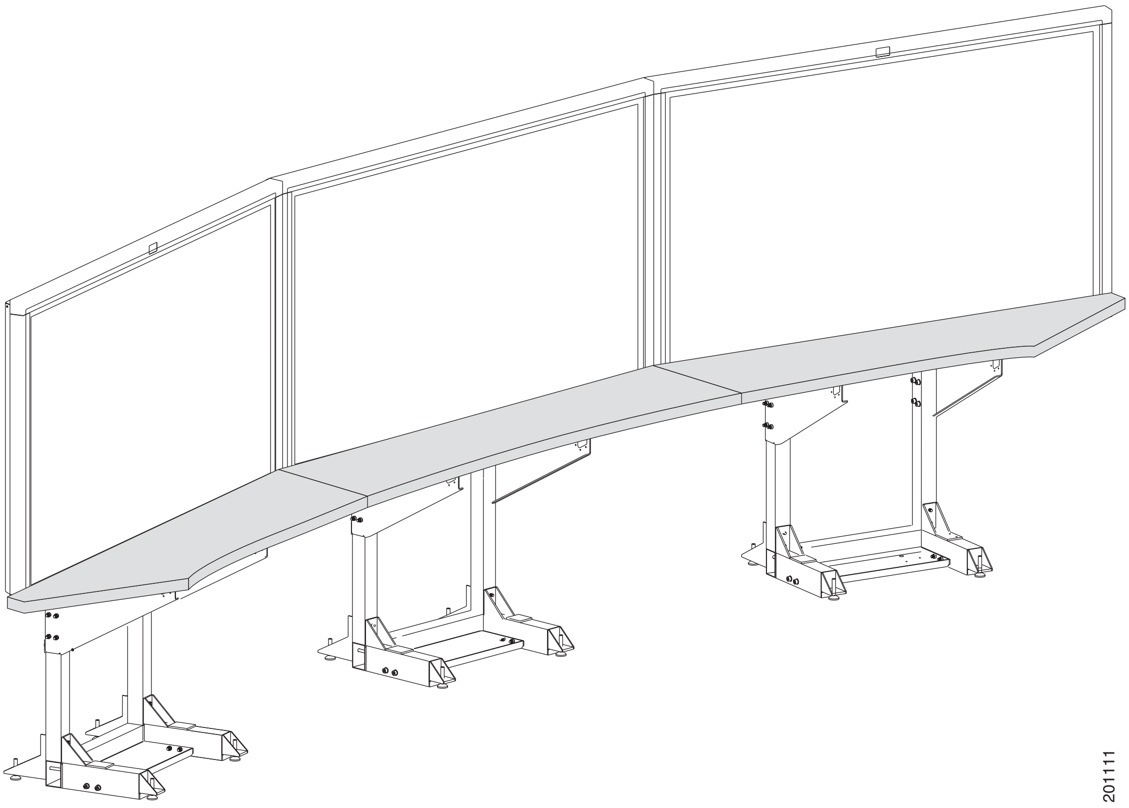
Caution The edges of the Plasma displays are sharp and uncomfortable to lift with bare hands. Nonslip gloves are recommended.

Caution Do not lift the display without appropriate back support, foot protection (such as steel-toed shoes), and room to lift the display using your legs and not your back.

Warning **The displays are heavy and may cause injury or damage if care is not taken to support them properly while mounting. Use caution and additional assistance as needed.**

Step 2 Attach the Display shelves to the Display shelf supports

Figure 3-2 ***Attach the Display shelves to the Display shelf supports***



Note The Display shelves are used in this chapter for leveling purposes only. The Display shelves and the attaching bracketing hardware are described in Chapter 5, Building the Display Shelf Assembly.
Use the M8 x 20 mm screws in the Accessory Kit to attach the Display shelves. Refer to Chapter 5 for more information.

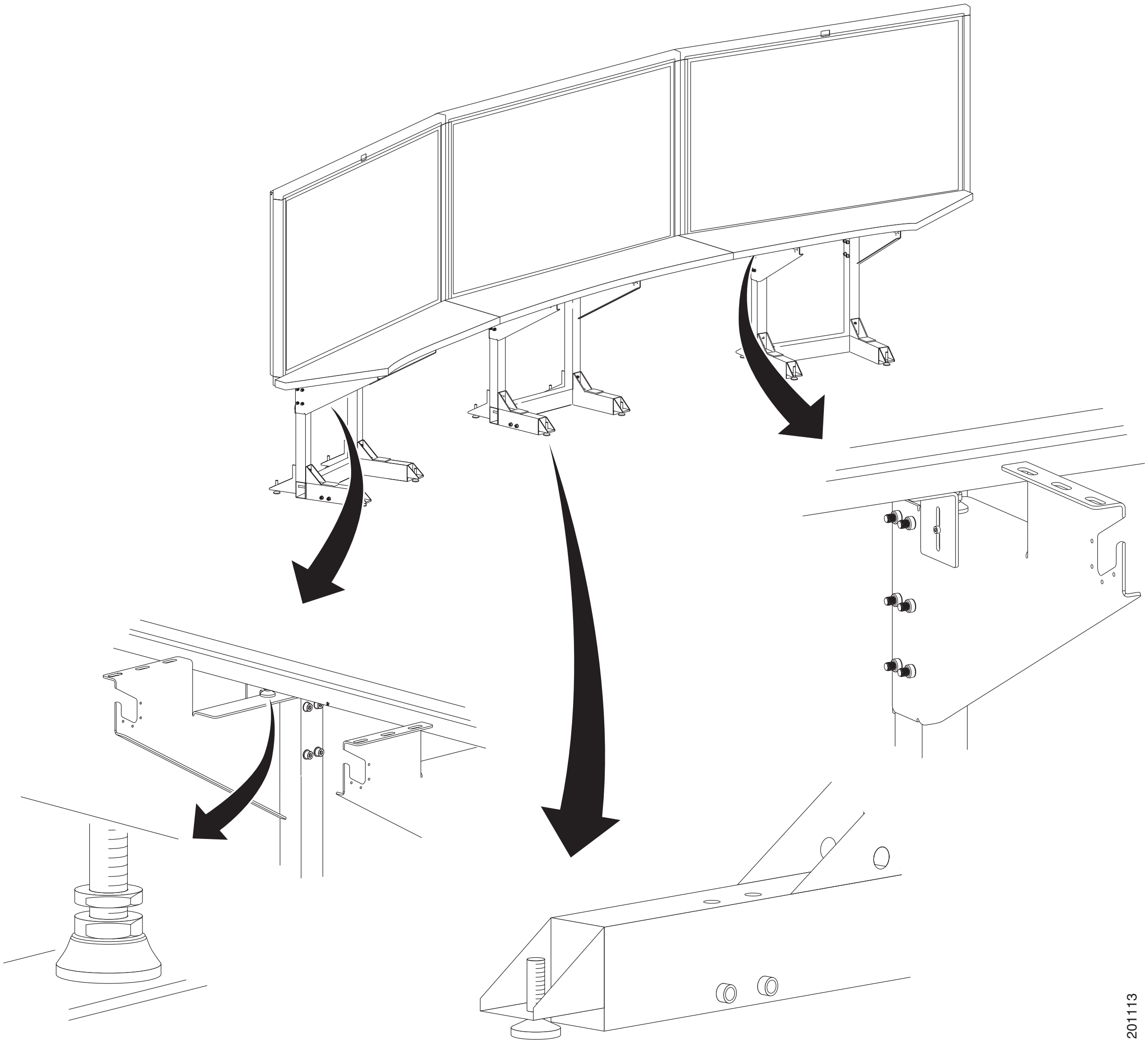
Purpose of Leveling the Plasma displays

The three Plasma displays act as windows allowing a three-way view into the remote Cisco TelePresence conference room. The Display shelf in front of each Plasma display acts as a visual bridge between the local and remote conference rooms. In order to provide the experience of one conference table the Display shelf must appear seamlessly integrated with the remote conference table.

Leveling Alignment Points

Step 3 Use the leveling alignment points to level and align the Plasma displays.

Figure 3-3 Leveling Alignment Points



Note You can use a 5 mm hex key to adjust the display structure's front and rear Foot Levelers.

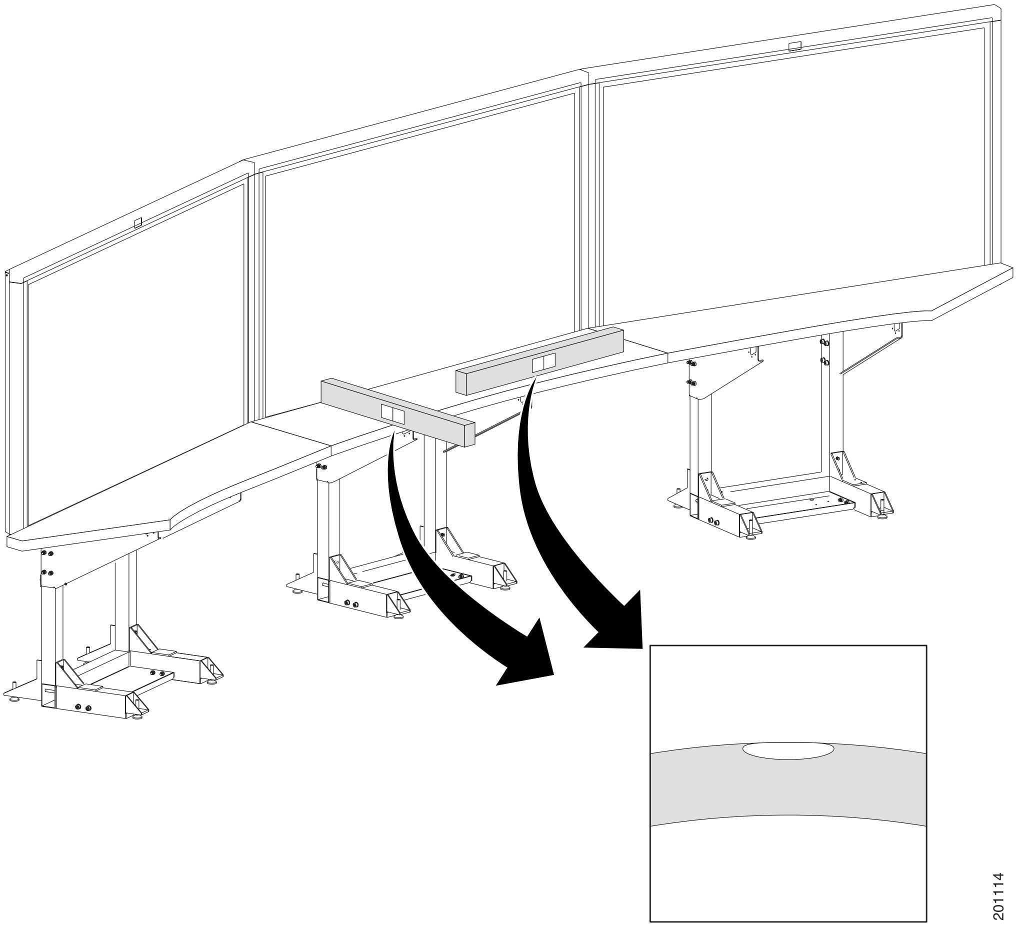
Leveling Goals

Leveling the Display shelves and the Plasma displays, and aligning the seams of the Display shelves with the edges of the Plasma displays insures that images displayed from the remote conference room match the local conference room configuration.

The leveling goals illustrated in Figure 3-4 through Figure 3-8 show how to use the leveling alignment points in Figure 3-3. You may need to perform any or all of the illustrated goals several times while aligning and leveling the Plasma displays.

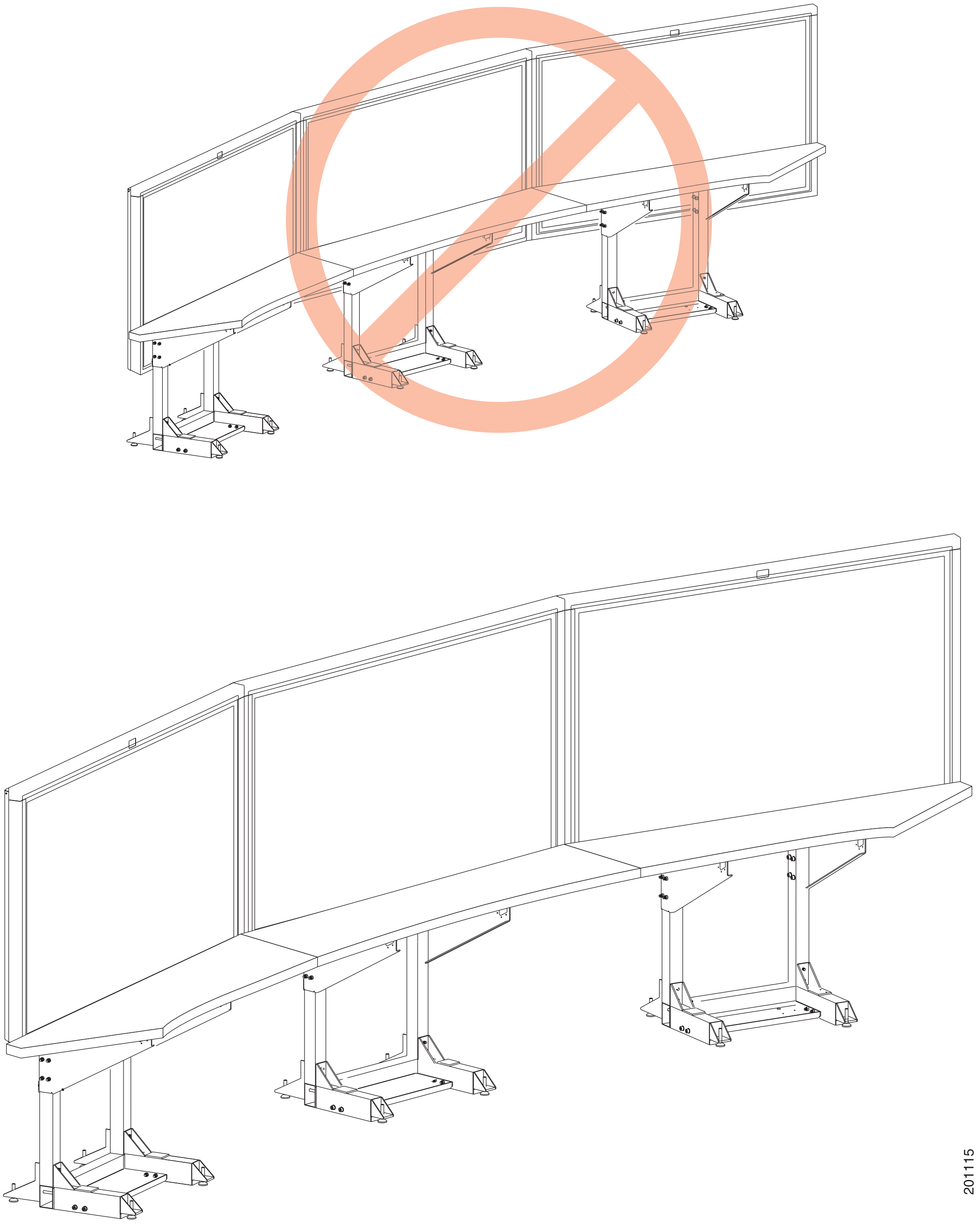
Step 4 Use the four Leveling feet on each Display structure to level the Display shelves along the X and Y axes. Leveling the Display shelves insures the Display structures are level. The Display structures should be level before attempting to level the Plasma displays.

Figure 3-4 Level the Display shelves along the X and Y axes



Step 5 The surface of the Display shelves should not obstruct any lines of resolution. Use the Plasma display Leveling feet to raise or lower the Plasma displays and make sure all lines of resolution can be seen when sitting at the conference table.

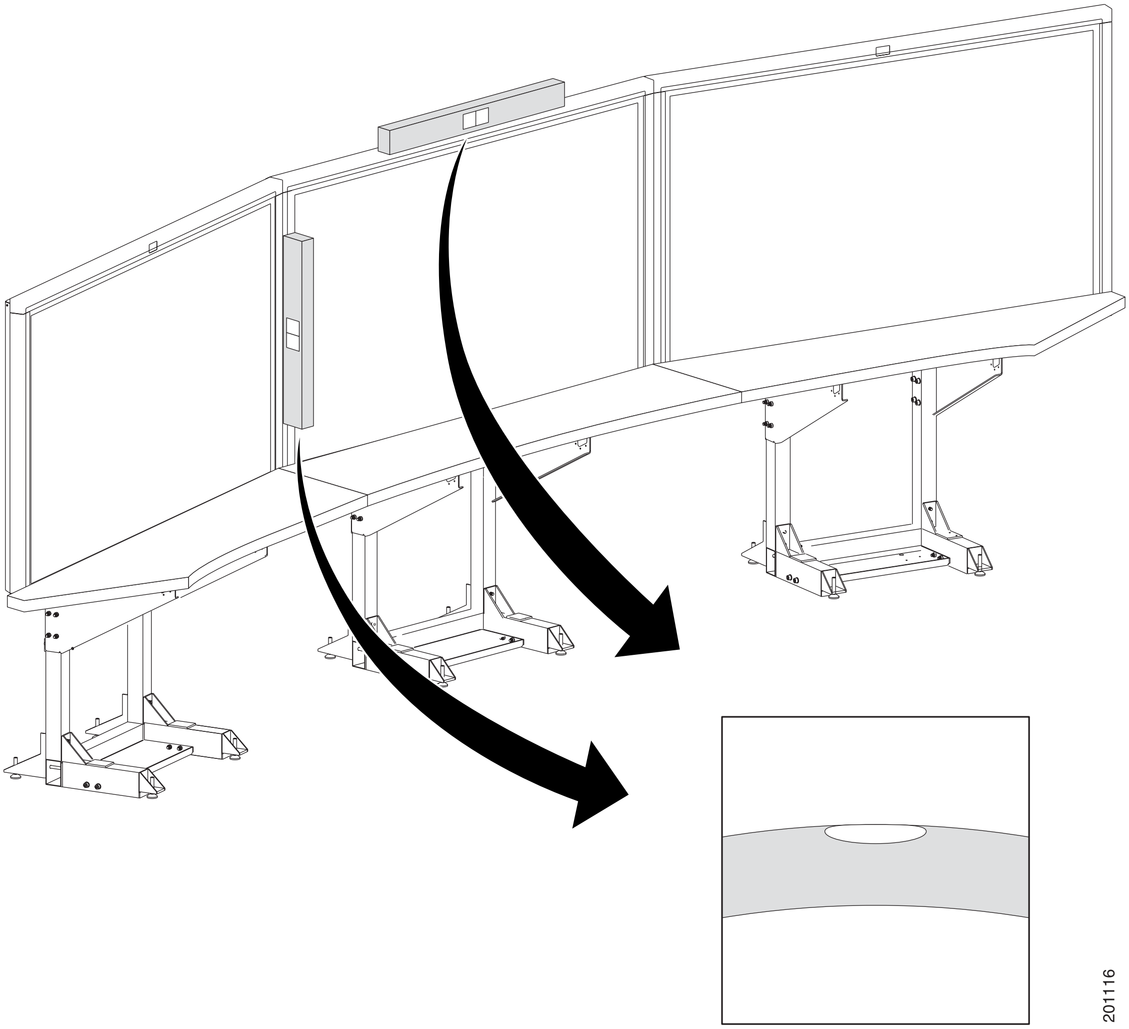
Figure 3-5 Make sure no lines of resolution are blocked by the Display shelves



Step 6 Use the Plasma display Leveling feet to level the Plasma displays along the X axis.
Use the Display tilt brackets to level the Plasma displays along the Y axis.

Tip You should level the center Plasma display first. Then align the left and right Plasma displays to the center display.

Figure 3-6 Level the Plasma displays along the X and Y axes

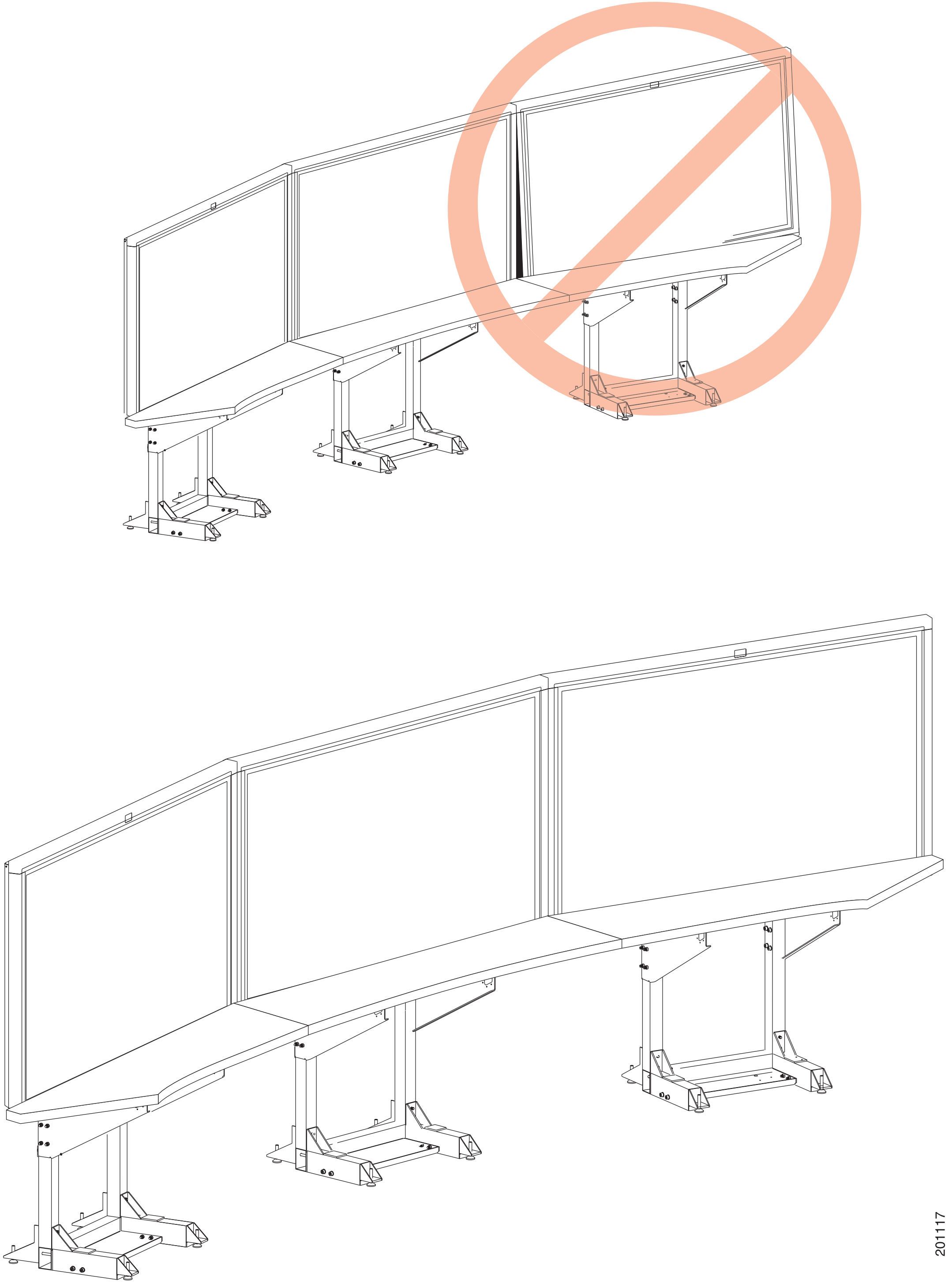


Caution Do not place the level against the Plasma display screen. Place the level against the Plasma display frame.

Step 7 Align the edges of Plasma displays

The gap between Plasma displays should be uniformly even from the top edge of the Plasma display to the bottom edge. You should try to make the gap as small as possible.

Figure 3-7 Align the edges of Plasma displays

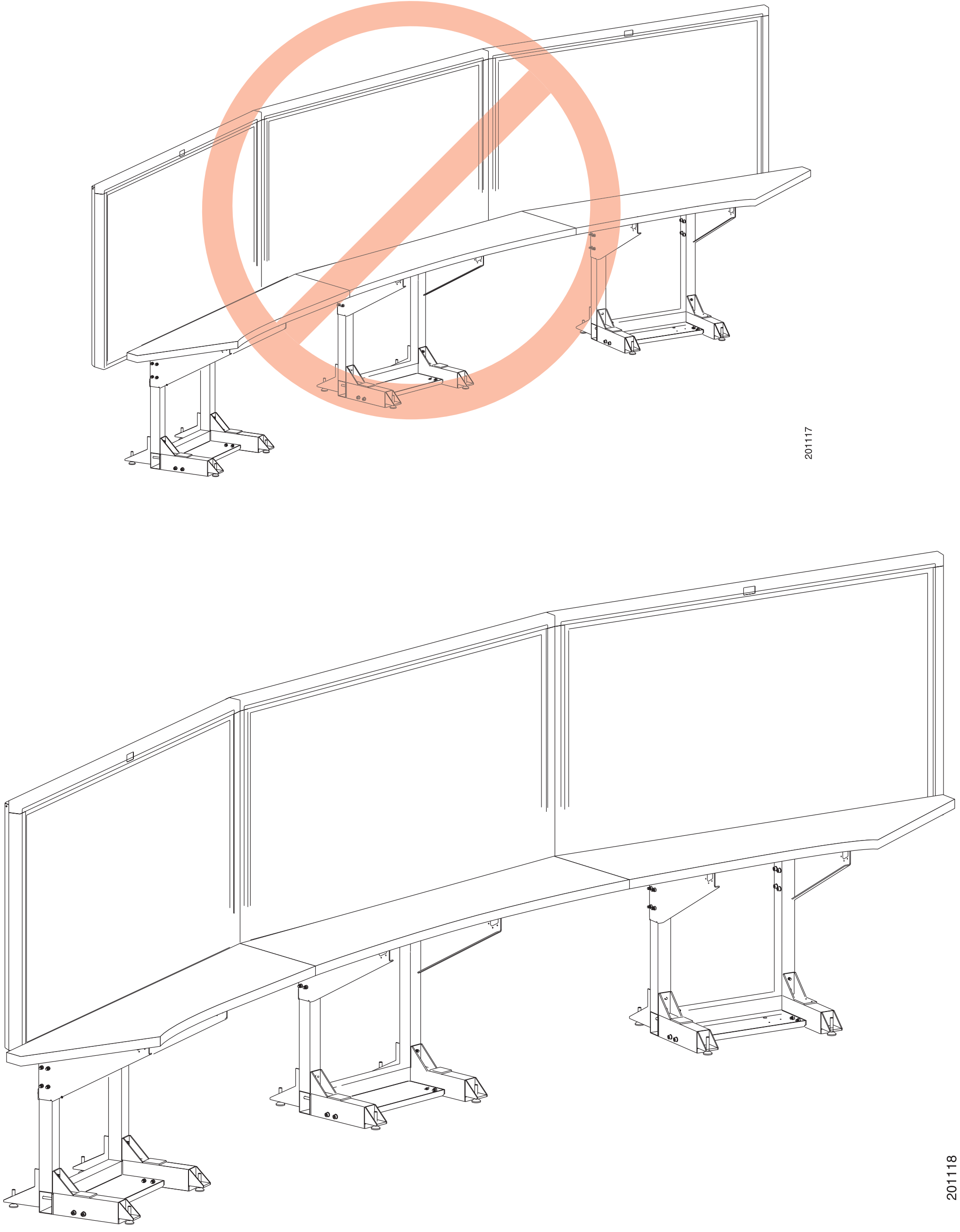


Step 8 Align the seams of the Display shelves with the seams between Plasma displays.

You may need to adjust the Plasma displays left to right so the seam created between the edges of two Plasma displays are aligned to the corresponding Display shelf seam.

Caution While moving the Plasma display to the left or right you need to make sure the Plasma display Leveling feet remain firmly seated on top of the Display shelf supports.

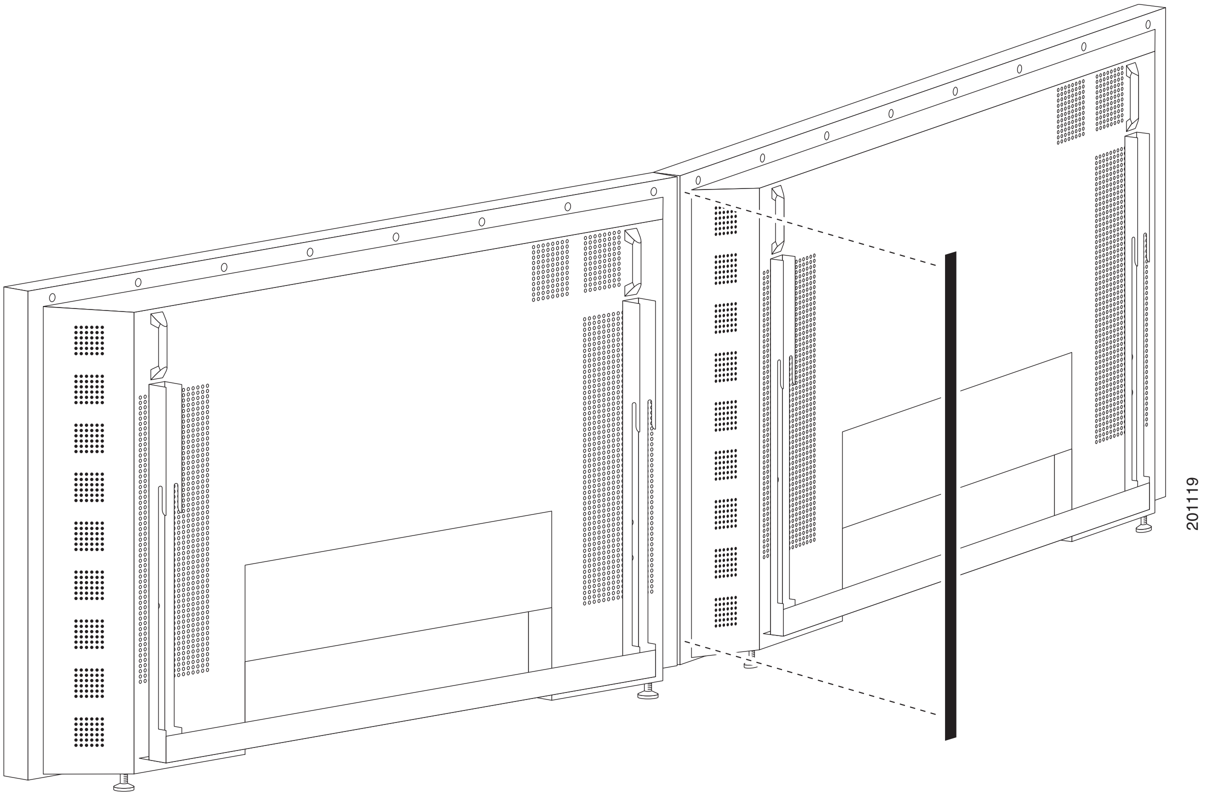
Figure 3-8 Align the seams of the Display shelves with the seams between Plasma displays



Completing the Plasma display setup

Step 9 Apply the Black Buffer strips

Figure 3-9 Apply the Black Buffer strips



CHAPTER 4

Building the Lighting Assembly

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
1	Lighting support brackets	700-23749-xx	6	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
2	Support struts	700-23752-xx	6	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
3	End structure brackets	700-23750-xx	4	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
4	Plastic diffuser panel: center	700-23745-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
5	Plastic diffuser panel: ends	700-23746-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
6	Plastic diffuser panel: top right	700-23747-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
7	Plastic diffuser panel: top left	700-23748-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
8	L-bracket	700-23899-xx	4	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
9	Metal trim panel: center left	700-24126-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
10	Metal trim panel: top side	700-23897-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
11	Metal trim panel: end	700-23898-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
12	Metal trim panel: center right	700-23896-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
13	Reflector bottom: center	700-23826-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	

Key	Part Description	Part Number	Qty	Ctn	Notes
14	Reflector bottom: top side	700-23827-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
15	Reflector bottom: end	700-23828-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
16	Reflector bottom spacer	700-24152-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
17	Reflector top: center	700-23731-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
18	Reflector top: top side	700-23734-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
19	Reflector top: end	700-23735-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
20	Reflector transition piece: left	700-23756-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
21	Reflector transition piece: right	700-23757-xx	1	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
22	Reflector transition piece: corner	700-23758-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
23	Light “cup” bracket	700-23737-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
24	5-foot center light fixture	74-5361-xx	3	27, 28, 29 (CTS3K-FUR-MAPLE) 24, 25, 26 (CTS3K-M)	
25	4-foot side light fixture	74-5362-xx	2	30, 31(CTS3K-FUR-MAPLE) 27, 28 (CTS3K-M)	
26	M8 x 70 mm screws	48-2274-xx	10	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
27	M8 x 20 mm screws	48-2273-xx	10	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
28	M8 x 12 mm flat-head screws	48-2285-xx	10	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
29	Diffuser Panel braces / H-clips	700-25050-xx	2	26 (CTS3K-FUR-MAPLE) 23 (CTS3K-M)	
30	Compliance sticker for plasma display	47-21525-xx	1	1	
	Touch-up paint, white	74-5247-xx	1	1	Use this paint on the light reflectors to fix any minor cosmetic issues caused by shipping and handling.

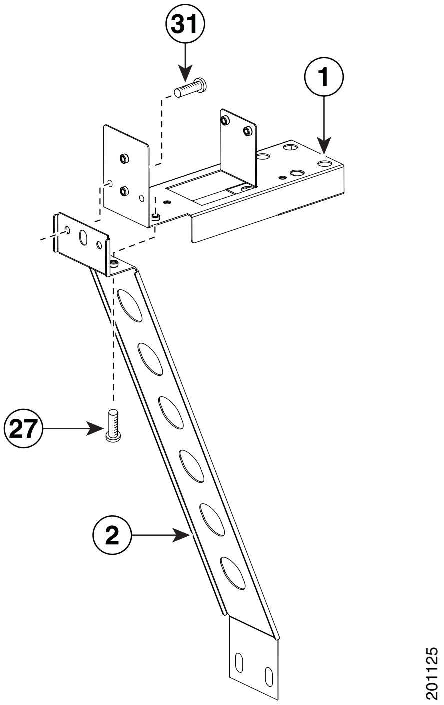
Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Caution Metal and plastic edges can be sharp. Cisco recommends you wear safety gloves and safety glasses when attaching the lighting assembly.

Note The directions *left* and *right* refer to the assembly as you face the Plasma displays.

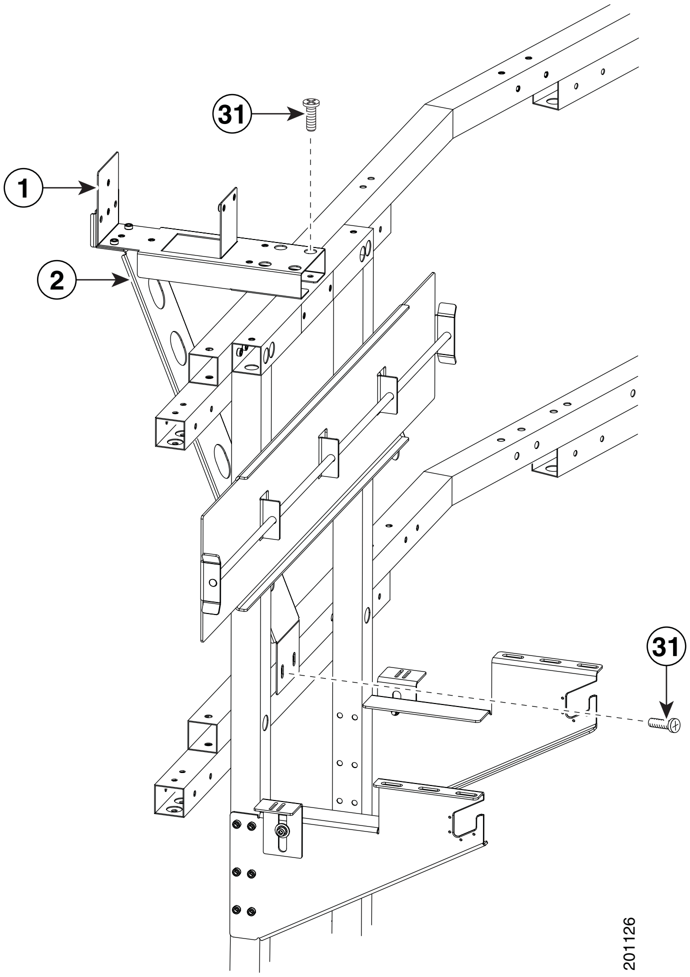
Step 1 Assemble the six Support struts and six Lighting Support brackets.

Figure 4-1 Support struts and Lighting Support brackets



Step 2 Attach the left and right outer Support brackets (from Figure 4-1) to the horizontal bar on the left and right Display structures.

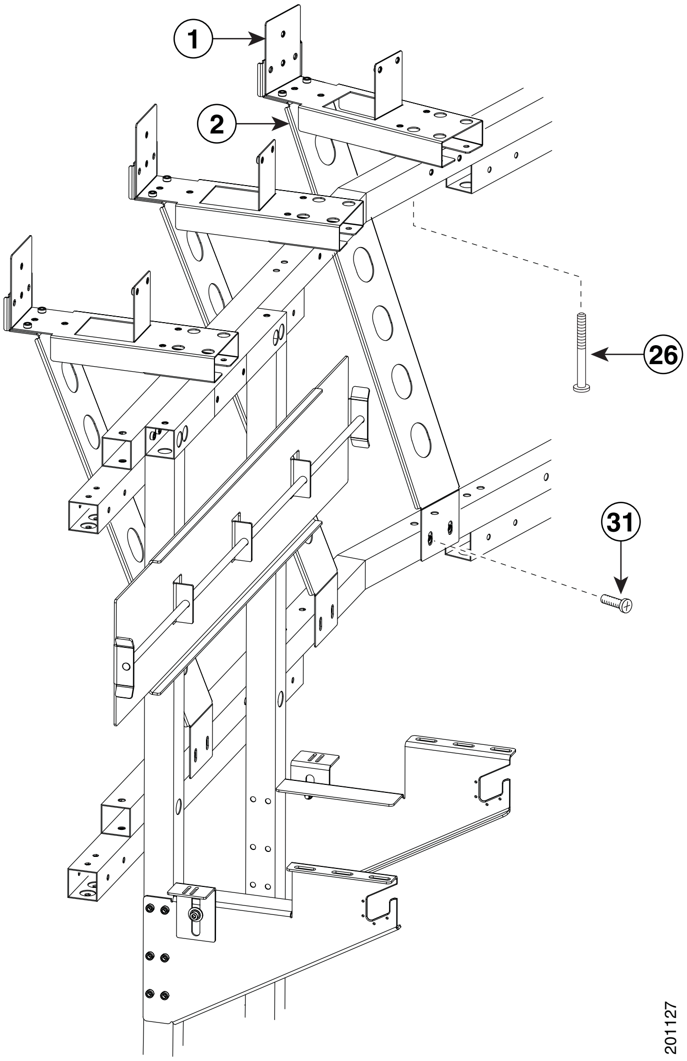
Figure 4-2 Left and Right outer Support brackets (from Figure 4-1)



Note There is no physical difference between the six Support brackets assembled in Figure 4-1. Any two can be used as outer Support brackets.

Step 3 Attach the four inner Support brackets to the Support crossbars.

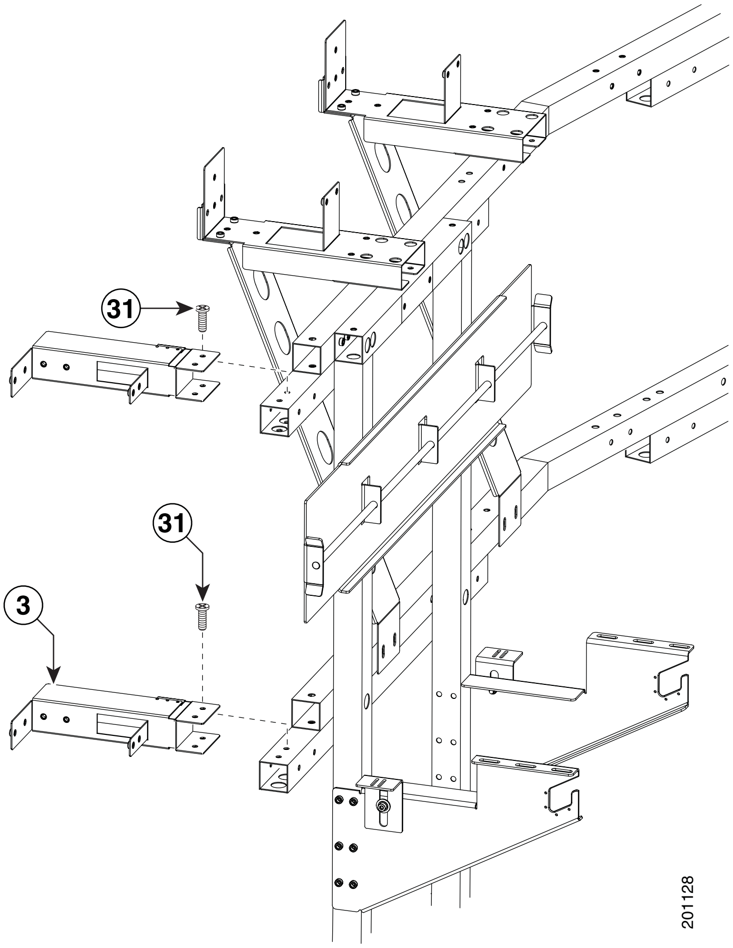
Figure 4-3 Four inner Support brackets (from Figure 4-1)



Note There is no physical difference between the six Support brackets assembled in Figure 4-1. Any two can be used as outer Support brackets.

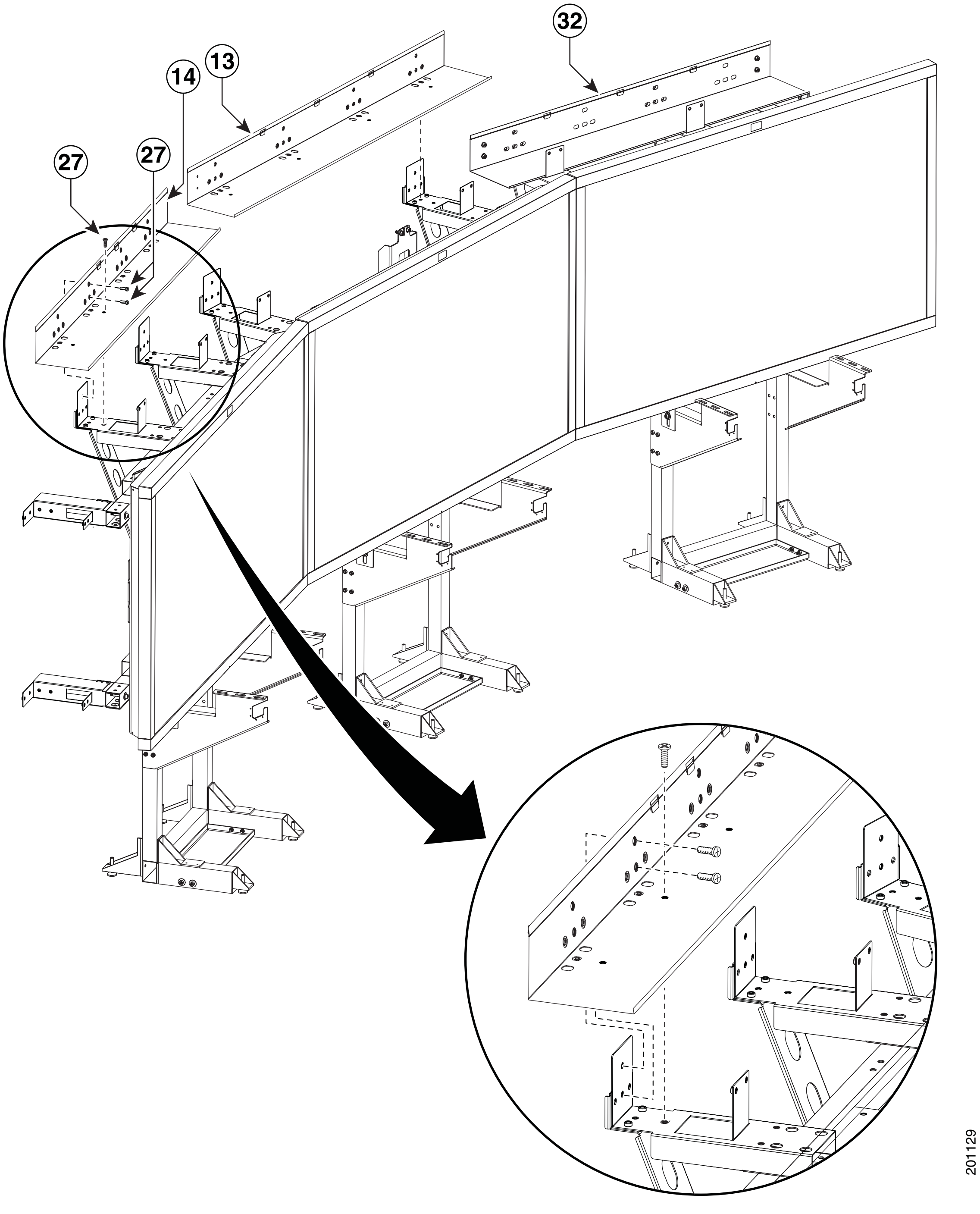
Step 4 Attach the four End structure brackets to the ends of the Support crossbars.

Figure 4-4 ***Four End structure brackets***



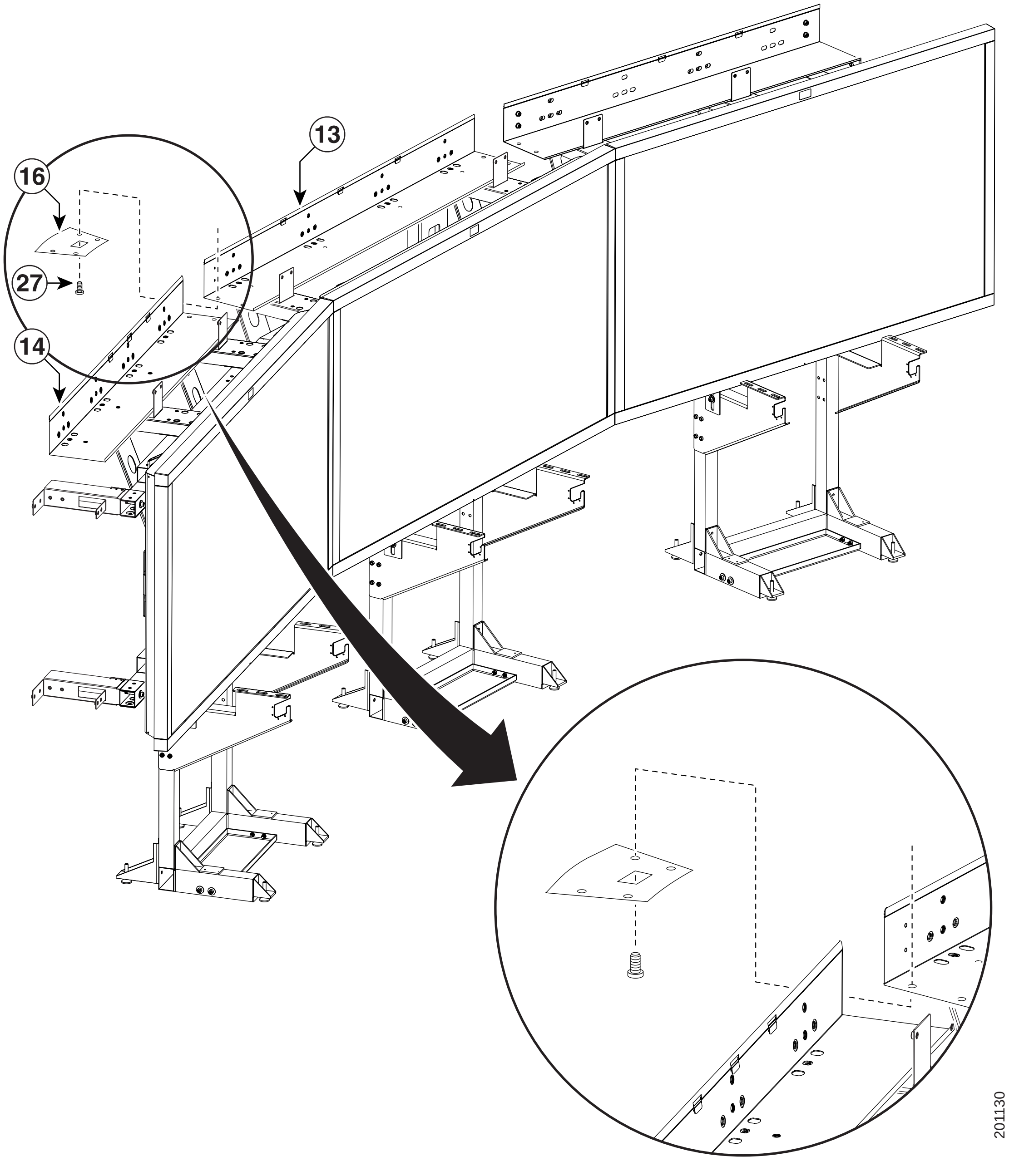
Step 5 Attach the three Reflector bottom trays to the Support brackets.

Figure 4-5 Three Reflector bottom trays



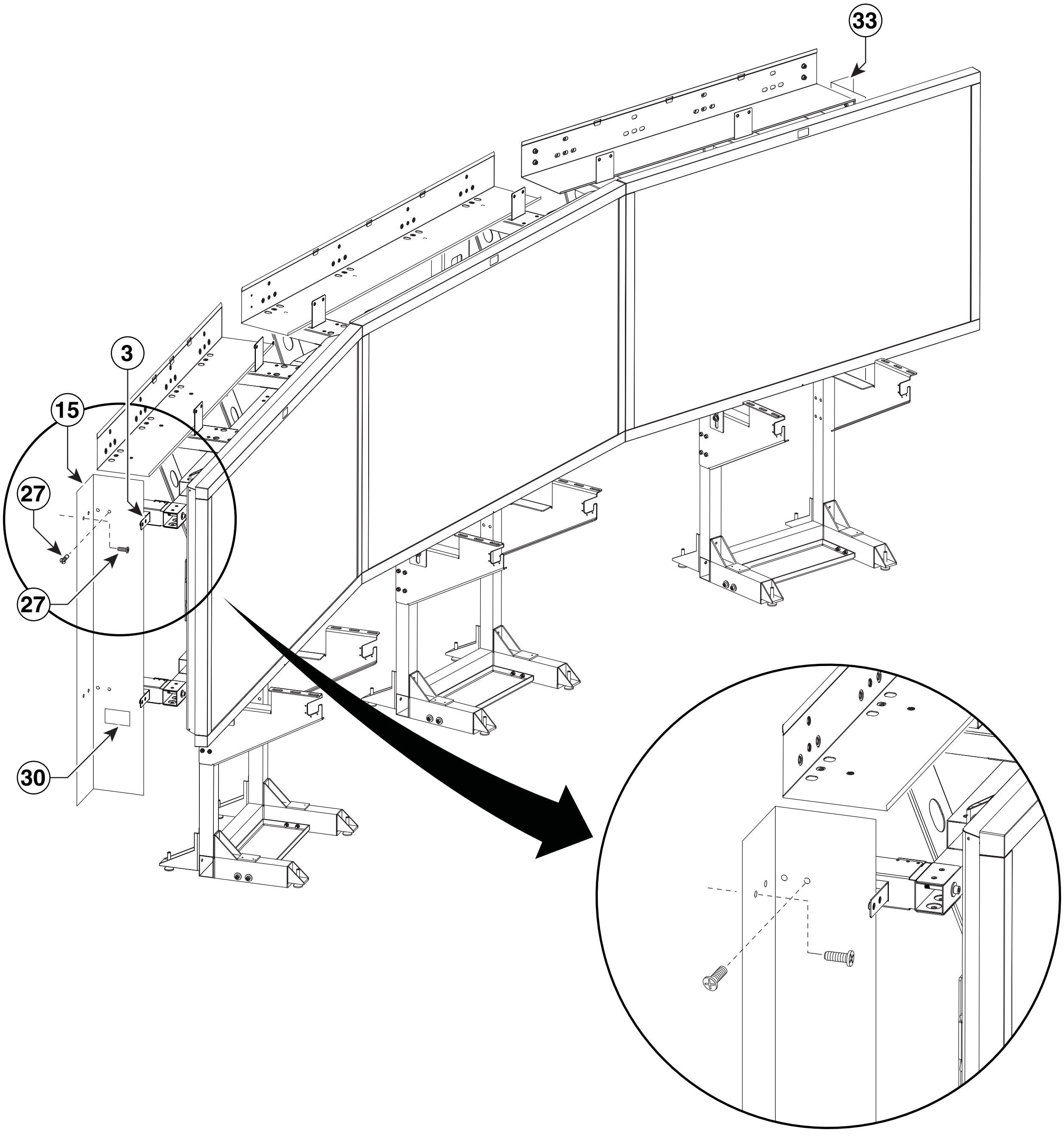
Step 6 Attach the two Reflector bottom spacers to join the three Reflector bottom trays.

Figure 4-6 ***Two Reflector bottom spacers***



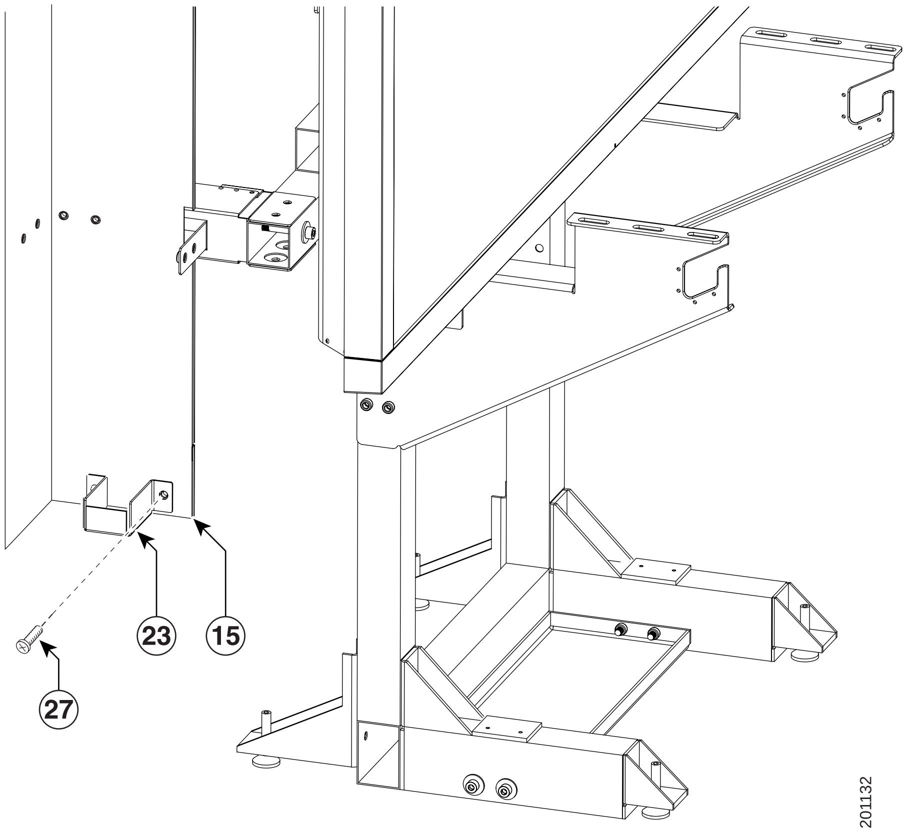
Step 7 Attach the left and right (vertical) Reflector Bottom ends to the End Structure brackets and attach the compliance sticker to the left reflector bottom end.

Figure 4-7 Left and Right (vertical) Reflector Bottom ends



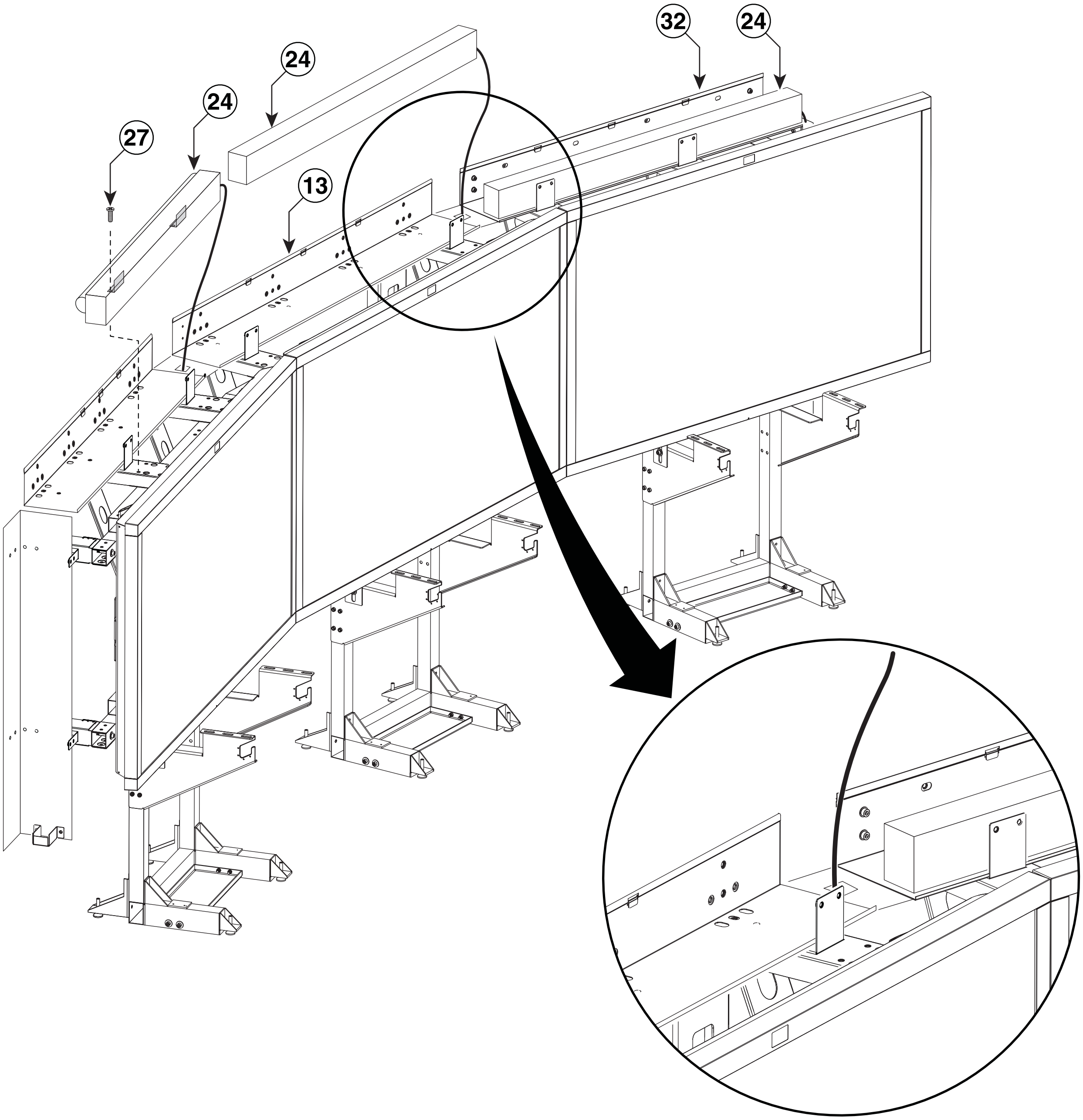
Step 8 Attach the Light Cup bracket to the left and right (vertical) Reflector Bottom ends.

Figure 4-8 Light Cup bracket



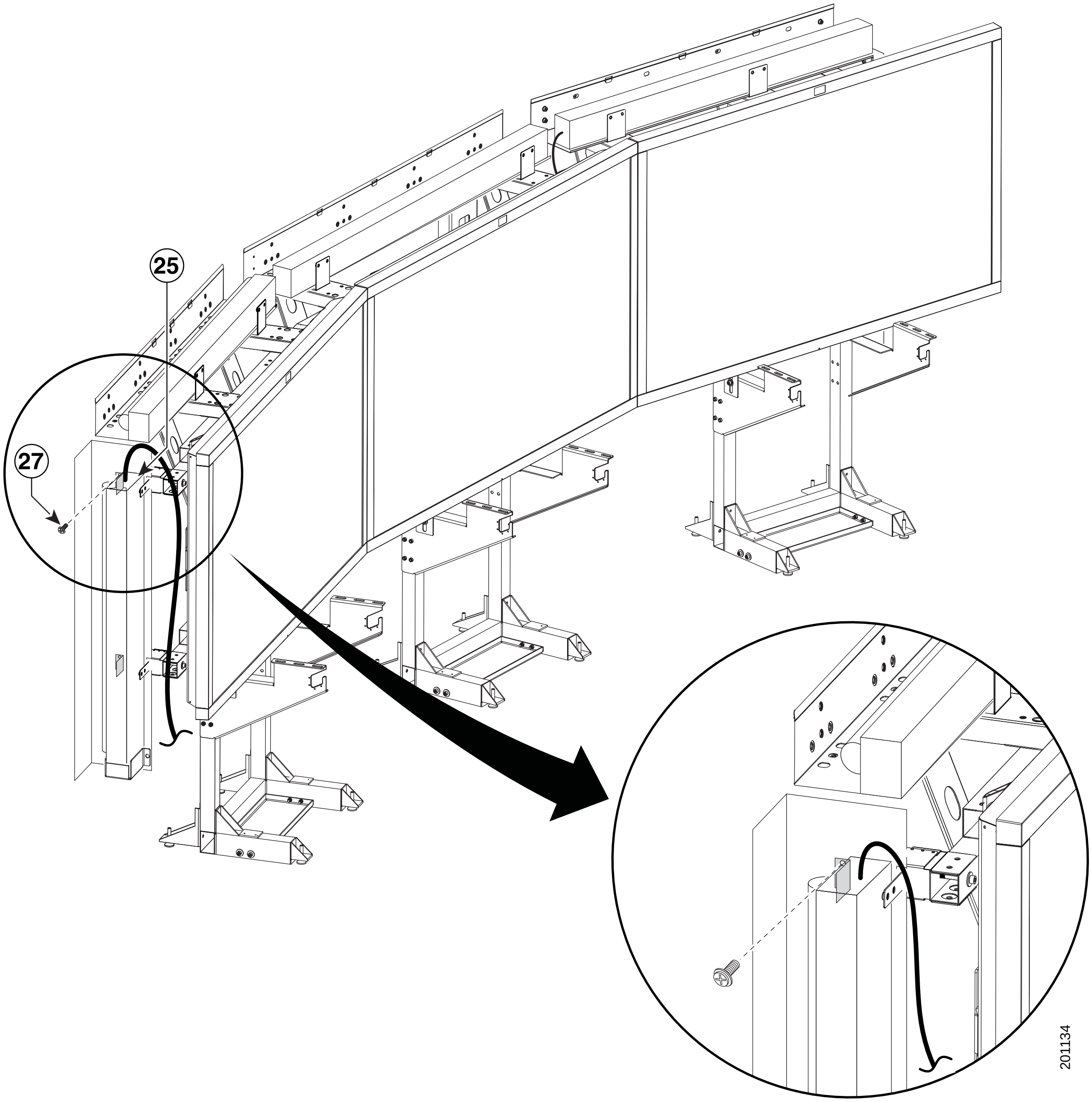
Step 9 Attach the three 5-foot Light fixtures inside the Reflector bottoms.

Figure 4-9 Three 5-foot Light fixtures



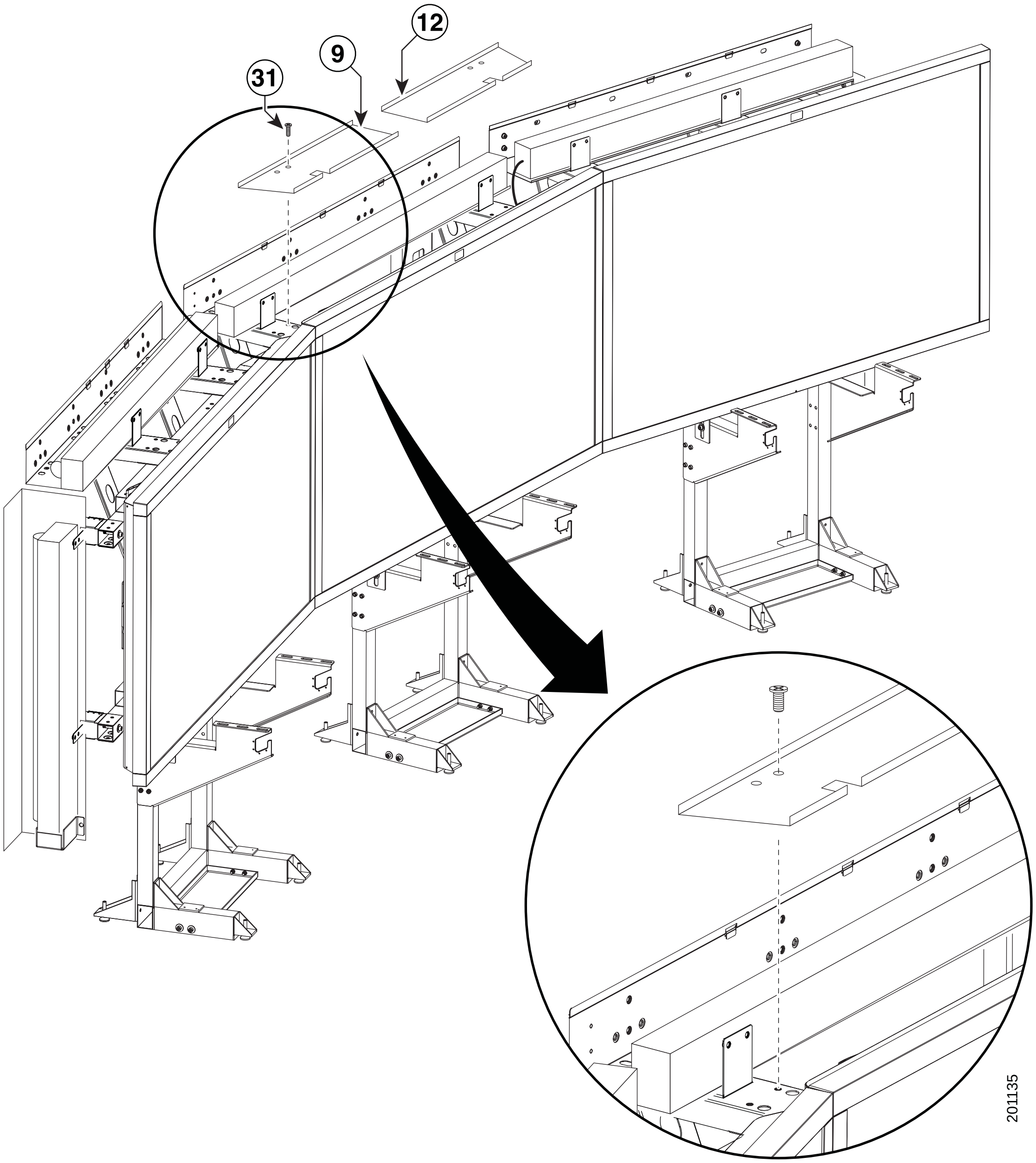
Step 10 Attach the left and right 4-foot Side Light fixtures to the left and right (vertical) Reflector Bottom ends. The power cords for the Side Light fixtures should extend from the top of the fixtures (Figure 4-8).

Figure 4-10 Left and Right 4-foot Side Light fixtures



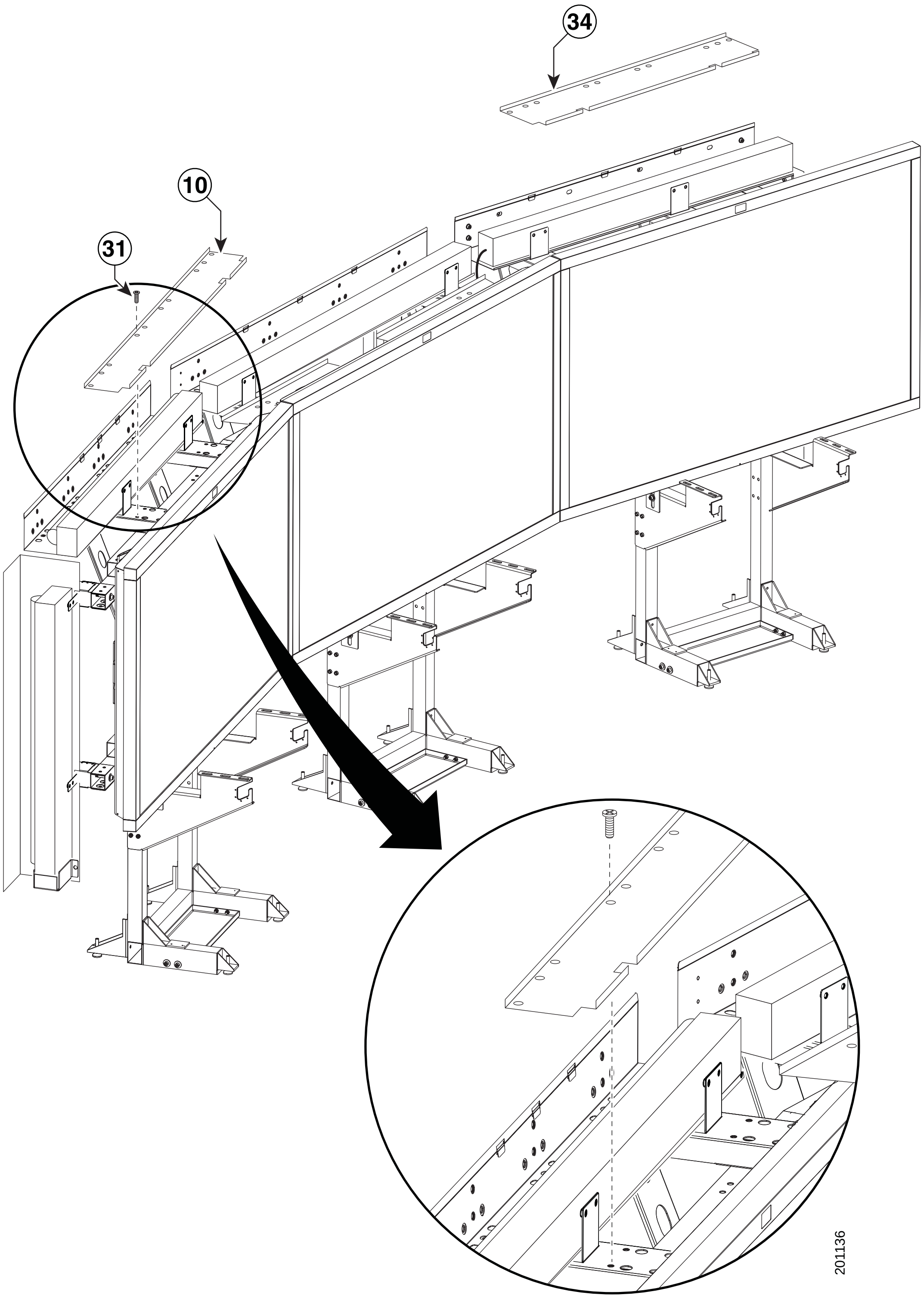
Step 11 Attach the two center Metal Trim panels.

Figure 4-11 Two center Metal Trim panels



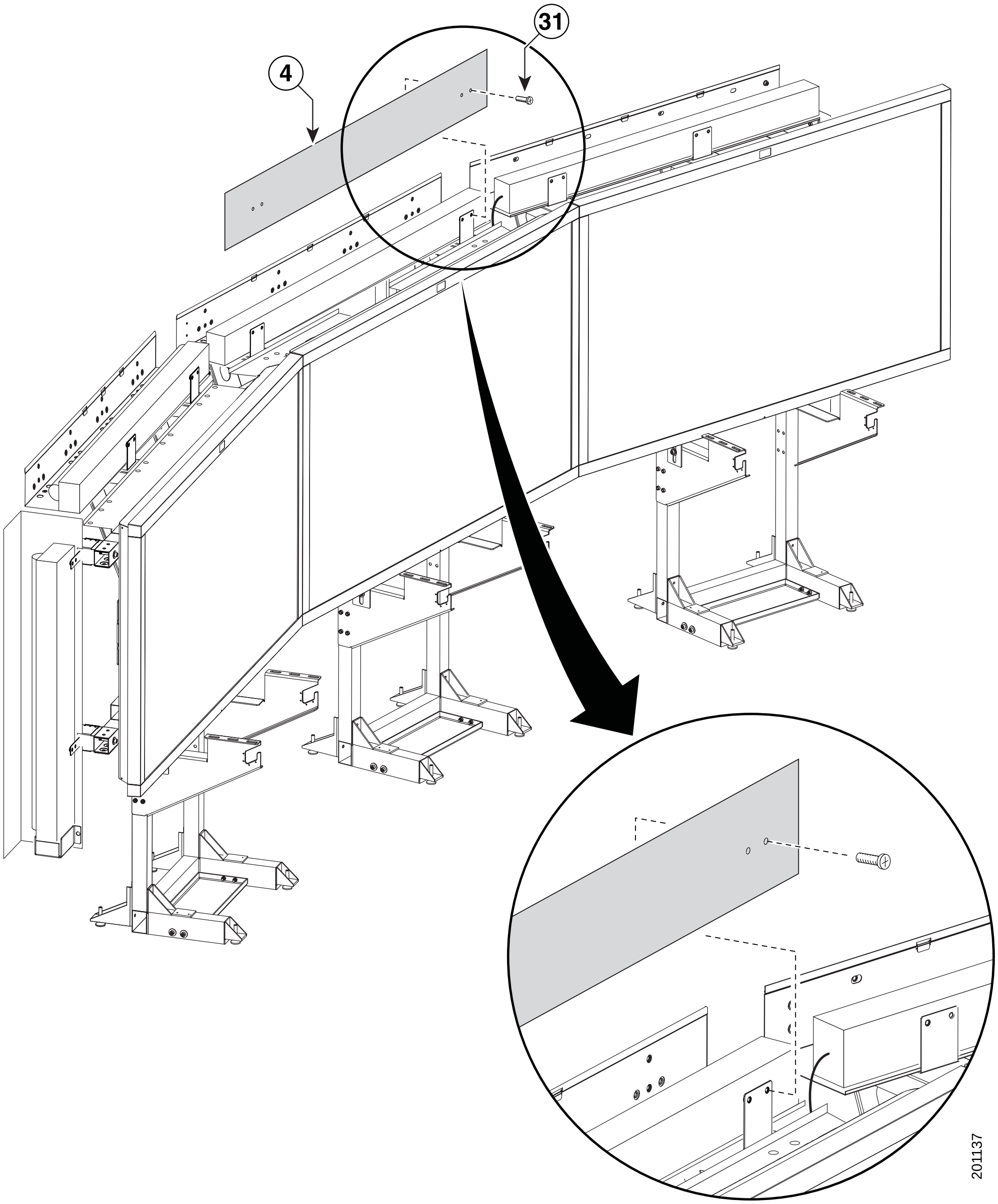
Step 12 Attach the two side Metal Trim panels.

Figure 4-12 Two side Metal Trim panels



Step 13 Attach the center Plastic Diffuser panel.

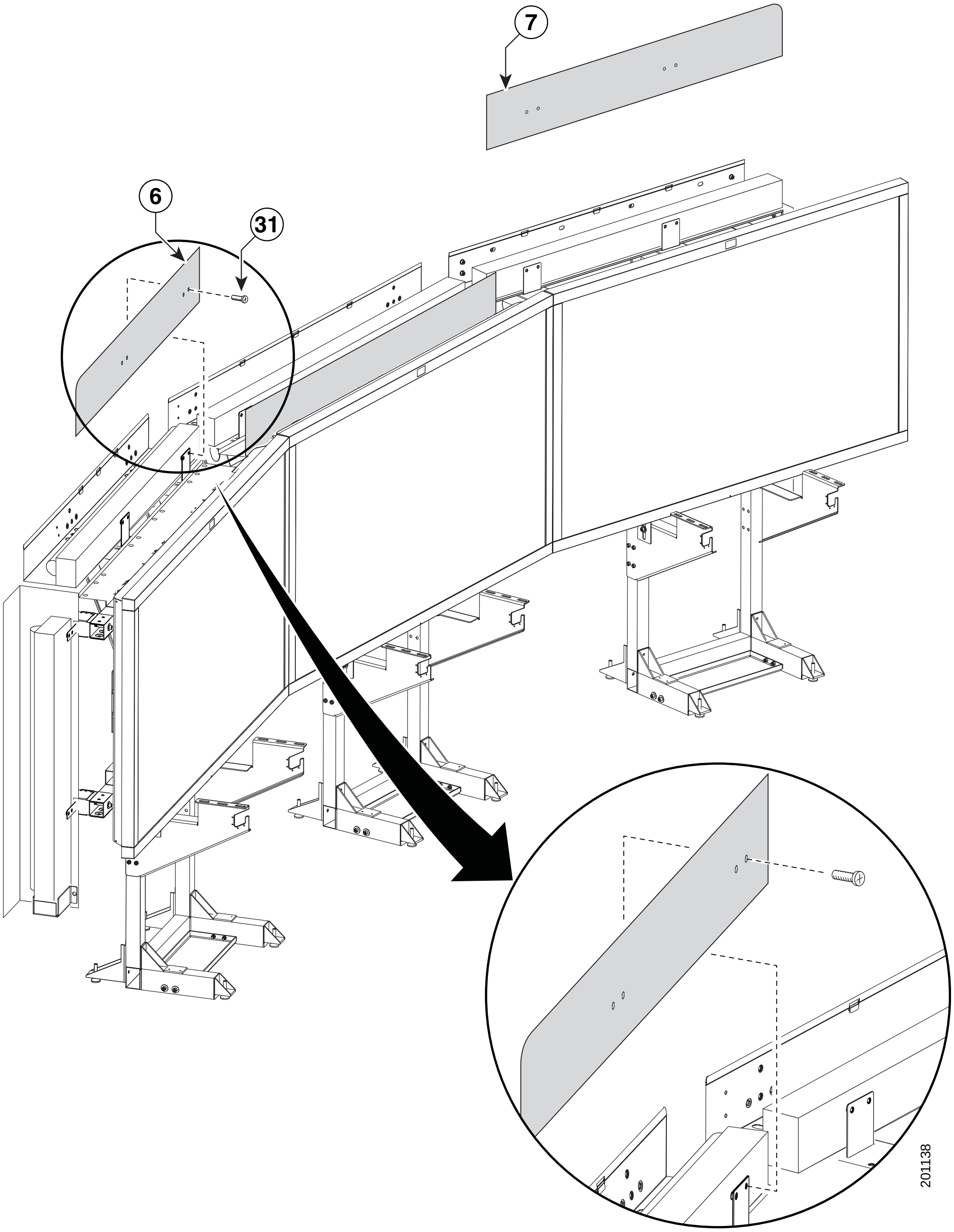
Figure 4-13 Center Plastic Diffuser panel



Step 14 Attach the left and right Plastic Diffuser panels.

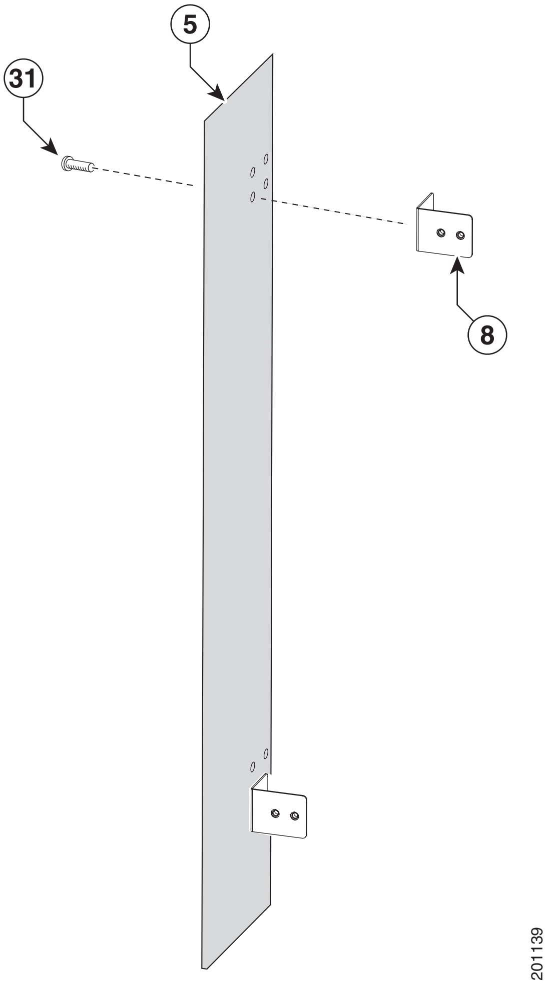
Note The rounded corners of the left and right Plastic Diffuser panels point outward.

Figure 4-14 Left and Right Plastic Diffuser panels



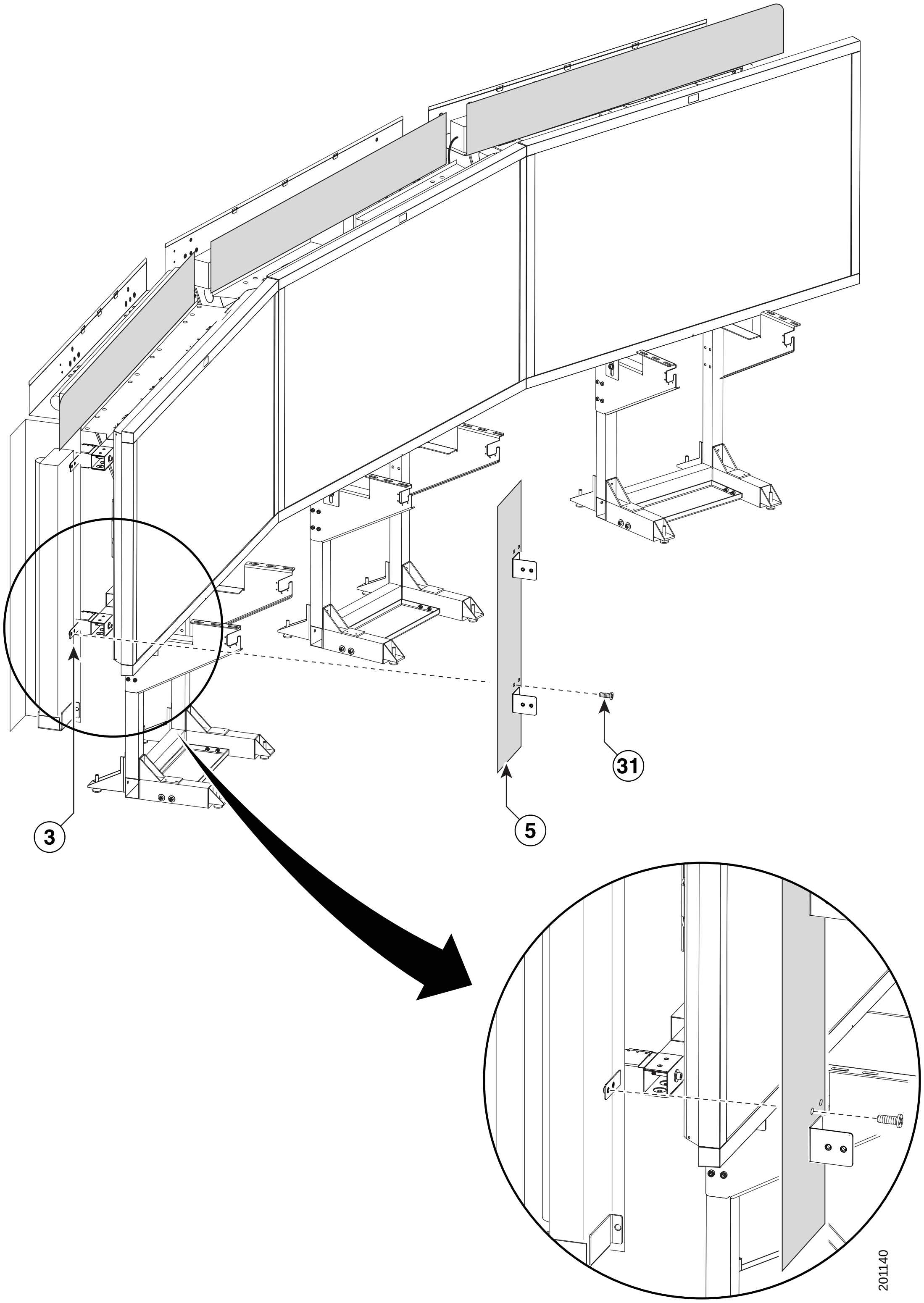
Step 15 Attach the four L-brackets to the two (vertical) end Plastic Diffuser panels.

Figure 4-15 Four L-brackets



Step 16 Attach the two (vertical) Plastic Diffuser panels to the End Structure brackets.

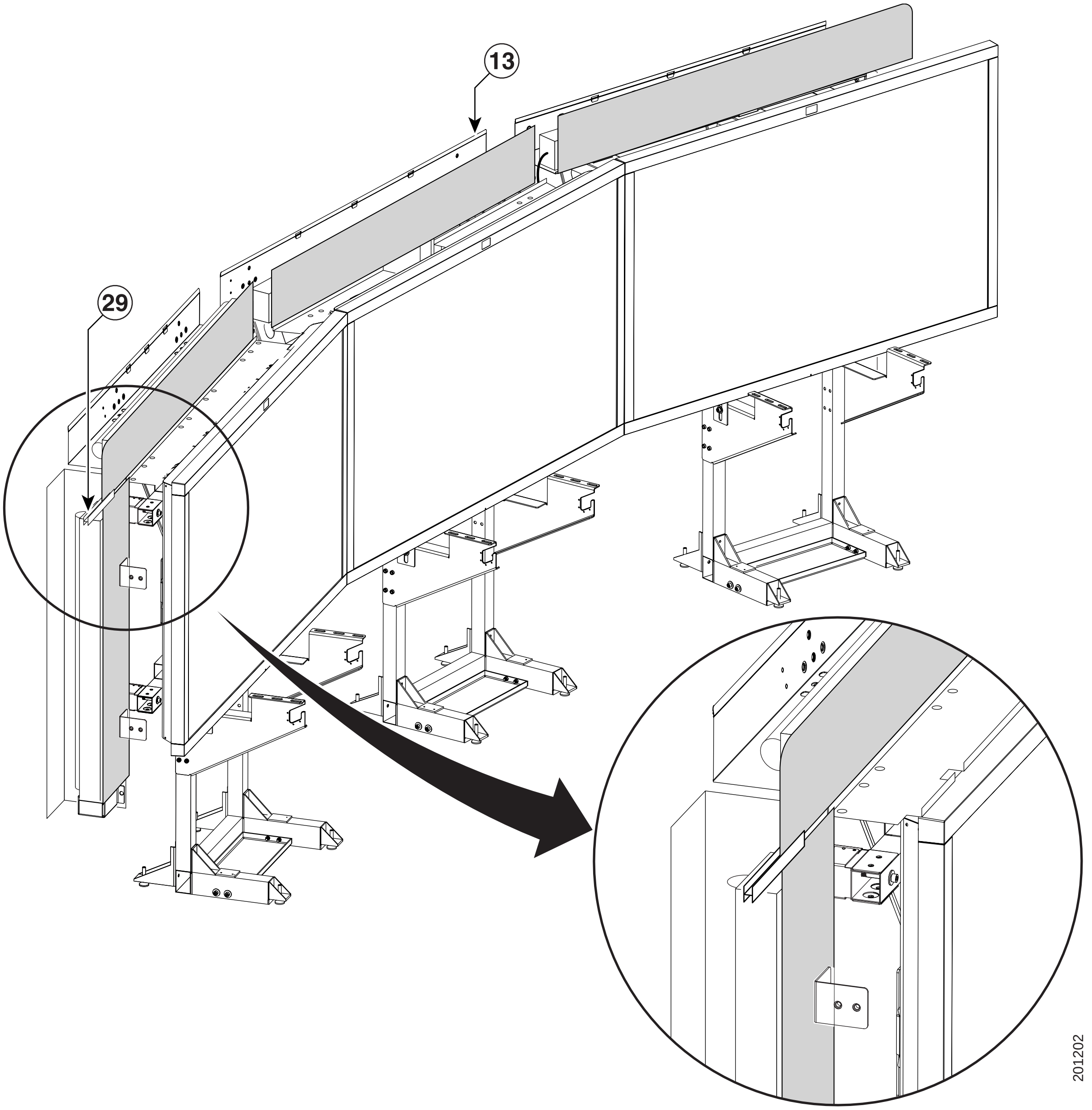
Figure 4-16 Two (vertical) Plastic Diffuser panels



Step 17 Slide the Plastic Diffuser Panel brace between the end (vertical) Plastic Diffuser panel and the left and right Plastic Diffuser panels.

Note If the diffuser becomes scratched, use a black felt-tip permanent marker to cover the imperfection.

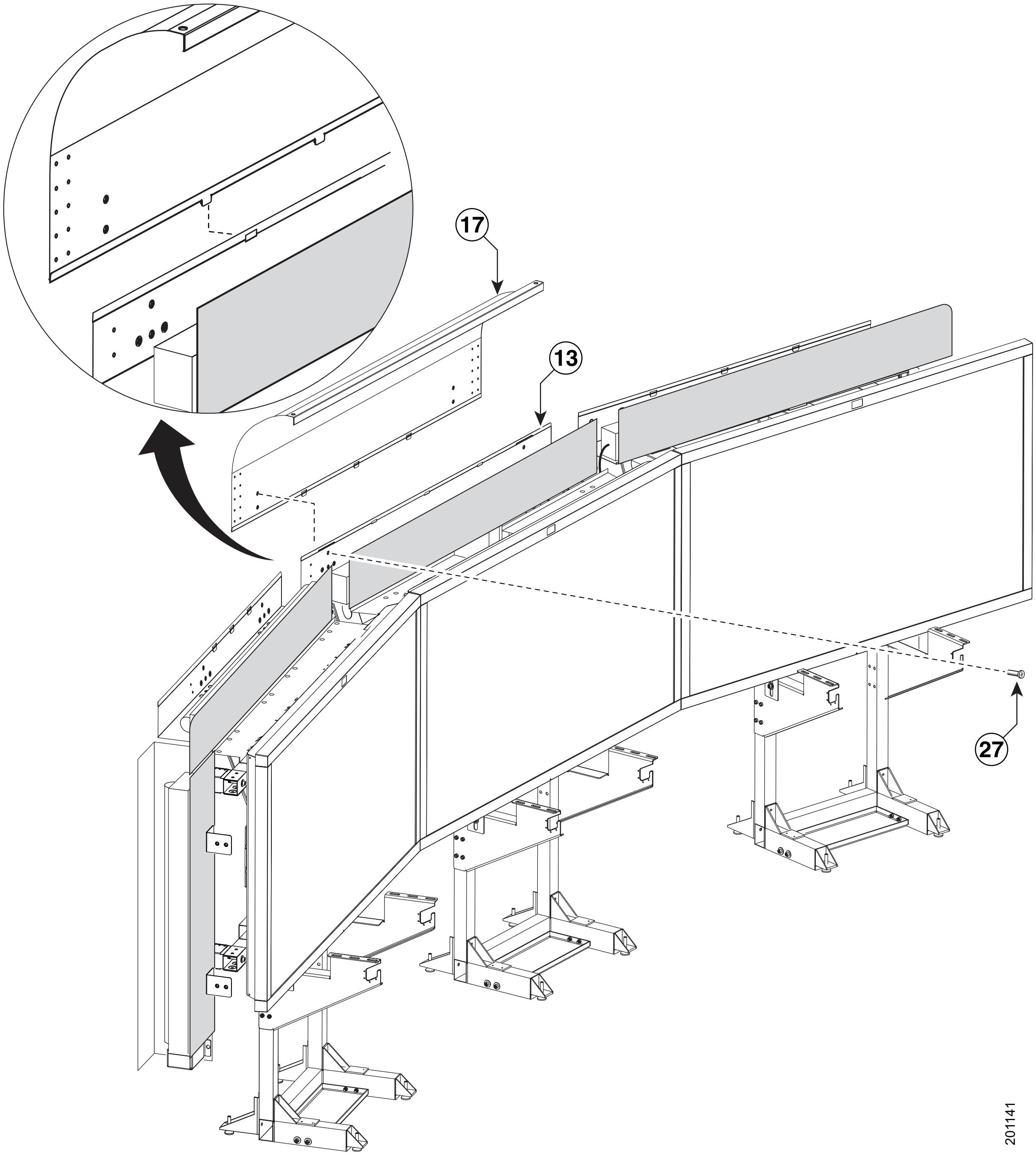
Figure 4-17 Plastic Diffuser Panel brace



Step 18 Attach the center Reflector top to the center Reflector bottom.

Note Do not tighten screws until completing Figure 4-22.

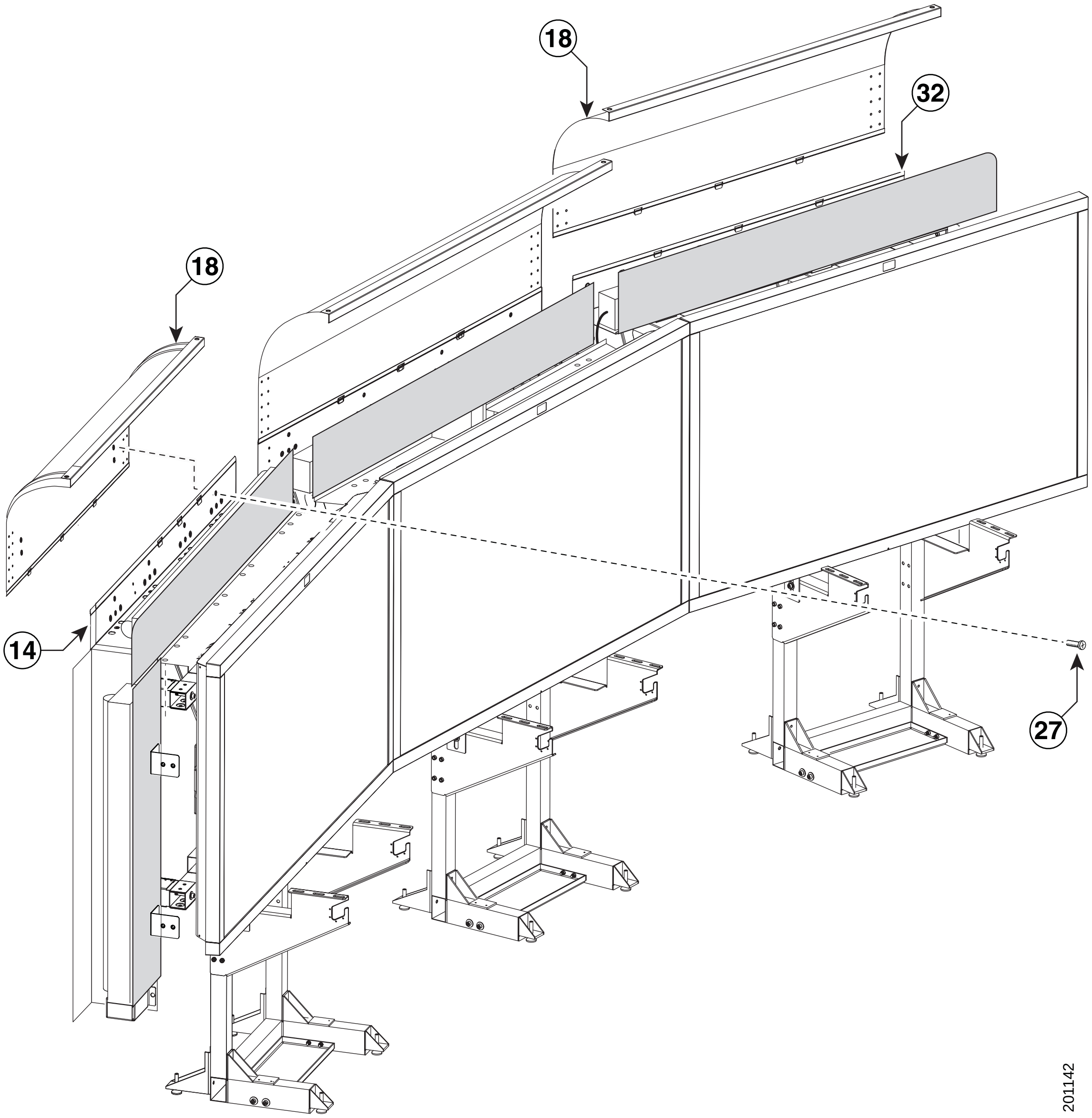
Figure 4-18 Center Reflector top



Step 19 Attach the left and right Reflector tops to the left and right Reflector bottoms.

Note Do not tighten screws until completing Figure 4-22.

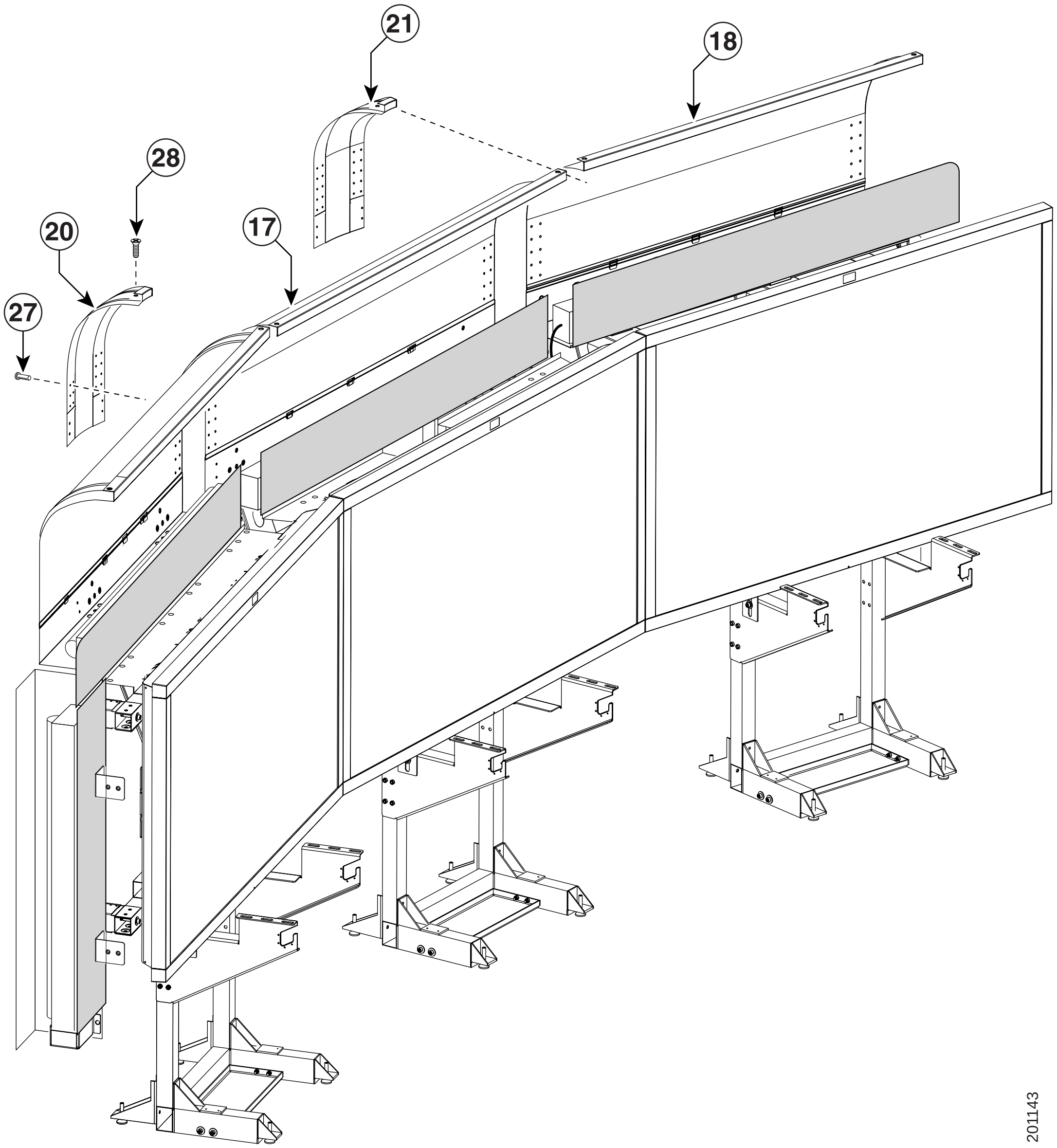
Figure 4-19 Left and Right Reflector tops



Step 20 Join the left, center, and right Reflector tops with the left and right Reflector Transition pieces.

Note Do not tighten screws until completing Figure 4-22.

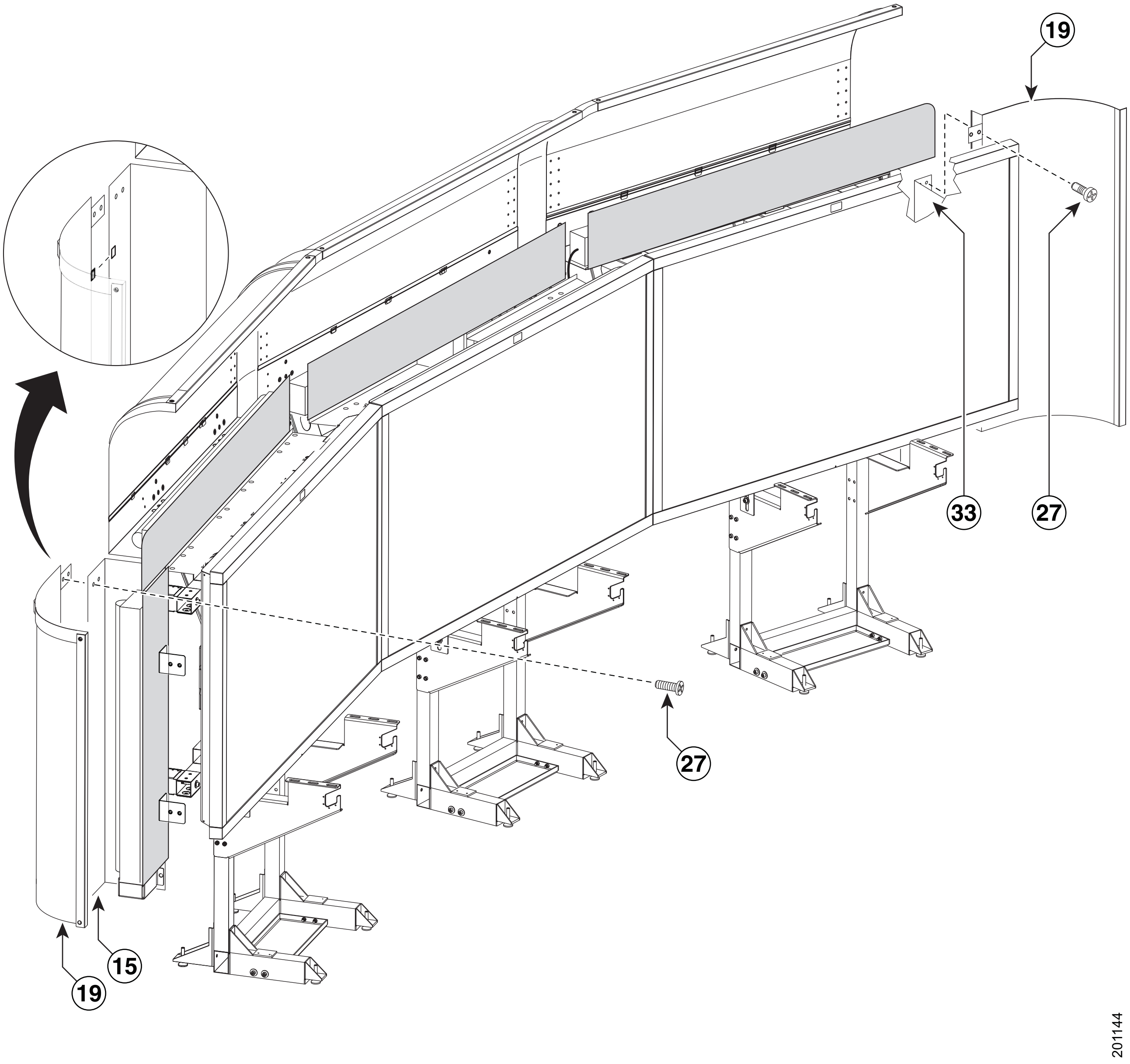
Figure 4-20 Left and Right Reflector Transition pieces



Step 21 Attach the left and right (vertical) Reflector ends to the left and right (vertical) Reflector Bottom ends.

Note Do not tighten screws until completing Figure 4-22.

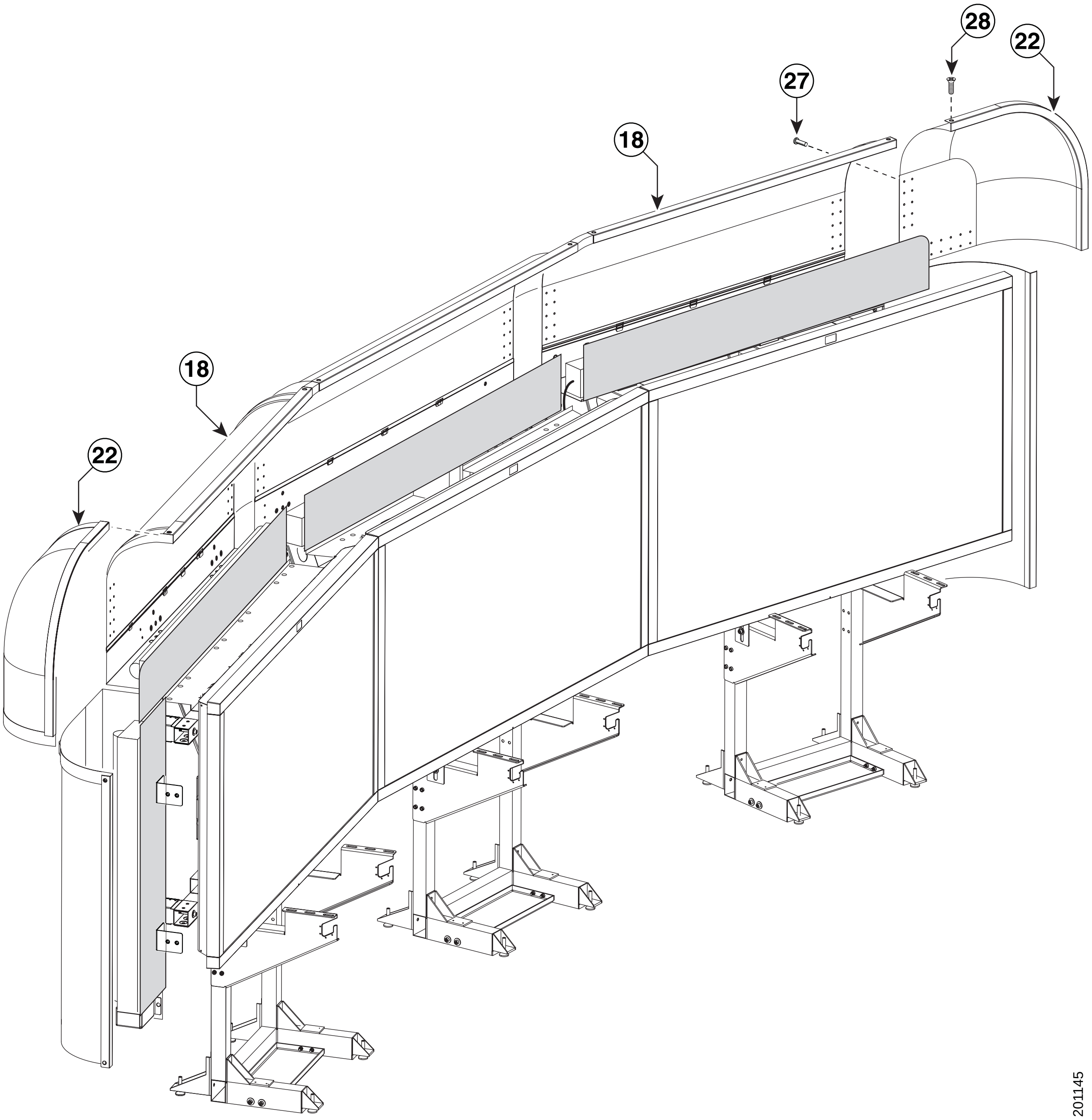
Figure 4-21 Left and Right (vertical) Reflector ends



Step 22 Attach the left and right corner Reflector Transition pieces to the Reflector tops.

Note Tighten all screws from Figure 4-18 through Figure 4-22. The goal is to insure the reflector pieces form a "seamless hood" around the lighting assembly.

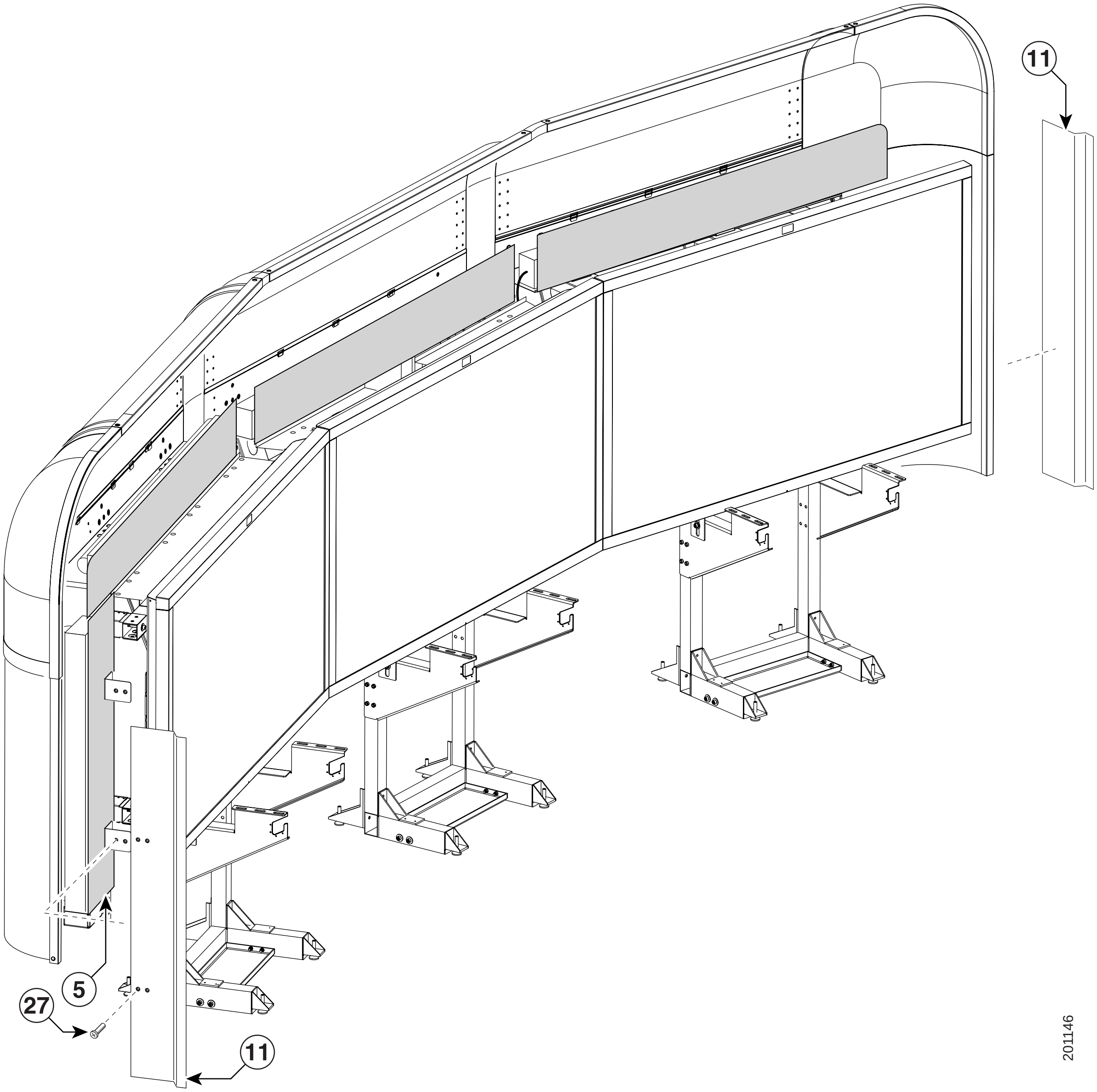
Figure 4-22 Left and Right corner Reflector Transition pieces



Step 23 Attach the two Metal Trim panels to the L-brackets attached to the two (vertical) Plastic Diffuser panels.

Note These Metal Trim panels cover the access opening used to route cables. You may not want to attach these Metal Trim panels until you complete the cable routing in Chapter 8, "Routing Power and Signal Cables."

Figure 4-23 Two Metal Trim panels



CHAPTER 5

Building the Display Shelf Assembly

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
Display Shelf, Product ID CTS3K-FUR-MAPLE					
1	Display shelf section: left	700-23600-xx (CTS3K-FUR-MAPLE) 700-23341-xx (CTS3K-M)	1	46	
2	Display shelf section: center	700-23599-xx (CTS3K-FUR-MAPLE) 700-23340-xx (CTS3K-M)	1	46	
3	Display shelf section: right	700-23598-xx (CTS3K-FUR-MAPLE) 700-23339-xx, (CTS3K-M)	1	46	
4	Not used				
5	Left accessory cabinet attachment bracket	700-23336-xx	1	18	
6	Right accessory cabinet attachment bracket	700-23337-xx	1	18	
7	Not used				
8	Connecting plates	700-23345-xx	4	33	
9	Speaker board brackets	700-23944-xx	6	33	
10	Wooden biscuits	700-23909-xx	24	44	
11	Cam lock rods	51-4579-xx	6	44	

Key	Part Description	Part Number	Qty	Ctn	Notes
12	M4 x 12 mm pan head screws	69-1878-xx 48-2426-xx		1	
13	M8 x 30 mm screw	48-2313-xx	15	1	
14	Cam lock coupling	51-4580-xx	20	1	
Accessory Cabinet					
1	Accessory cabinet, right	700-23601-xx	1	42, 43	
2	Accessory cabinet, left	700-23601-xx	1	42, 43	
3	Assembly Screen Supports	No part number	2	1	These brackets might also be located inside of the assembly cabinet. These brackets are only required if you use a Type 1 projector screen, part number 800-28681-xx. If your installation uses the projector screen with a product ID of CTS3K-SCREEN and a part number of 74-5416-xx, do not install these brackets.
4 and 12	M8 x 20 mm screws	48-2273-xx	14	1	

Key	Part Description	Part Number	Qty	Ctn	Notes
Display Shelf, Product ID CTS3K-M					
1	Display shelf section: left	74-5304-xx 95-9692-xx	1	44	
2	Display shelf section: center	74-5306-xx 95-9694-xx	1	44	
3	Display shelf section: right	74-5305-xx 95-9693-xx	1	44	
4	Not used	74-5297-xx (right) 74-5298-xx (left)	1 1		
5	Left accessory cabinet attachment bracket	700-23336-xx	1	18	
6	Right accessory cabinet attachment bracket	700-23337-xx	1	18	
7	Not used				
8	Connecting plates	700-23345-xx	4	33	
9	Speaker board brackets	700-23944-xx	6	33	
10	Splines	No part number	2	1	
11	Draw bolts	51-4579-xx	6	1	
12	M8 x 20 mm screws	48-2273-xx		1	
13	M8 x 30 mm screw	48-2313-xx	15	1	

14	M4 x 12 mm pan head screws	69-1878-xx 48-2426-xx	16	1	For connecting plates
Accessory Cabinet					
1	Accessory Cabinet, Right	74-5297-xx Kit # 69-1837-xx	1	37	
2	Accessory Cabinet, Left	74-5298-xx Kit #69-1838-xx	1	38	
3	Assembly Screen Supports	No part number	2	1	These brackets might also be located inside of the assembly cabinet.
4 and 12	M8 x 20 mm screws	48-2273-xx	14	1	

Caution The shelf segments are unstable during assembly. Use caution, and support all structures as required.

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Caution In order to prevent scratching the Display shelves, you should avoid putting any tools on the shelf surfaces.

Note The directions *left* and *right* refer to the assembly as you face the Plasma displays.

Note This illustration describes the hardware used to attach the three Display shelves and the hardware used to attach additional assemblies in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements." The Display shelves should be attached individually to the Display structures, as illustrated in Figure 5-3, Figure 5-4, and Figure 5-5.

Determining the Display Shelf Type

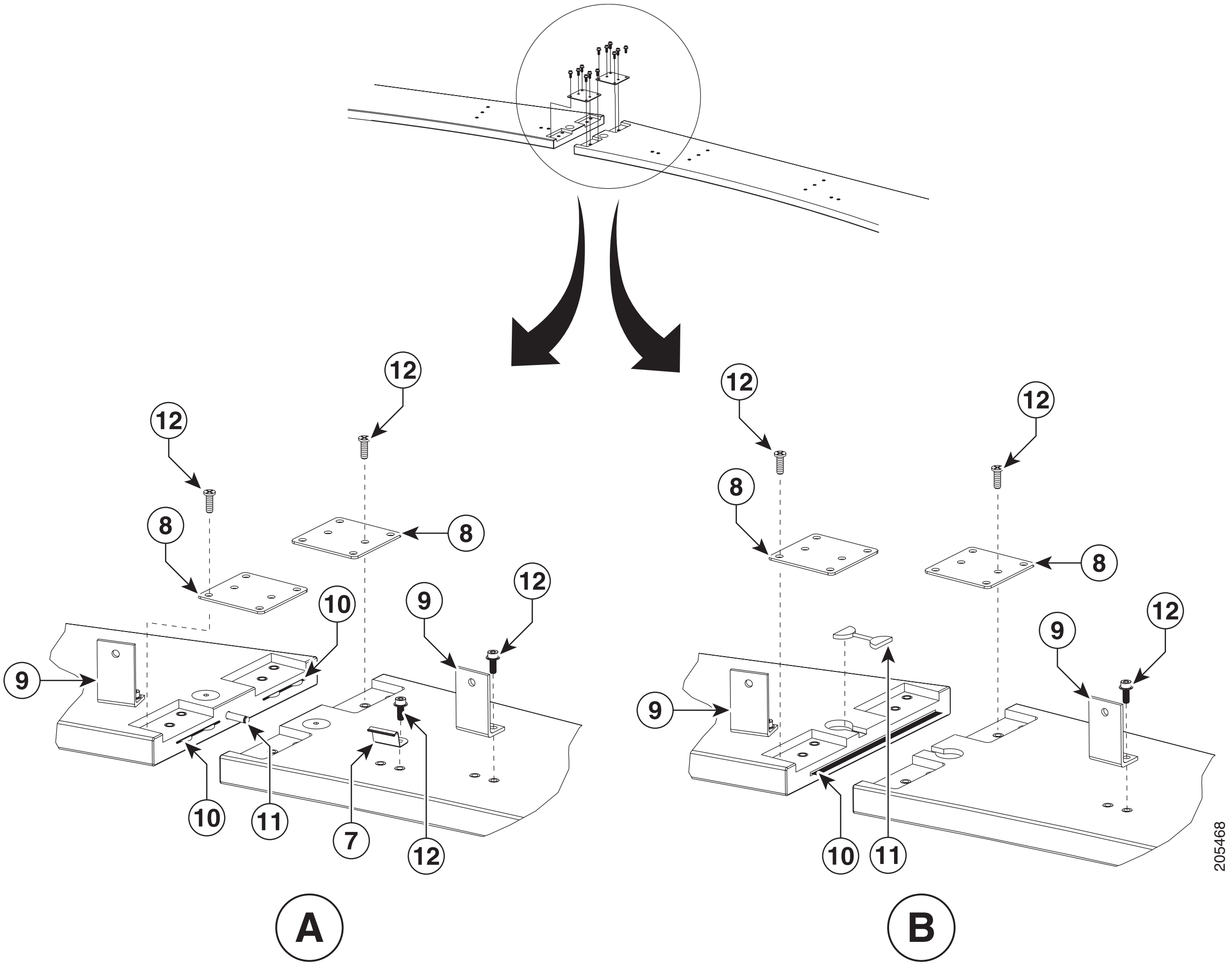
The CTS-3000 ships with two different types of shelves. Determine the type of shelf that you have by one of the following methods:

- Check the cartons that shipped with your product.
  - Display shelves with a product ID of CTS3K-FUR-MAPLE come in a single wooden box and are packed with the other table sections. Complete the steps in the "Building the Display Shelf Assembly, Product ID CTS3K-FUR-MAPLE" section on page 5-5.
  - Display shelves with a product ID of CTS3K-M are packaged in separate cardboard boxes and one wooden box. The part number is 69-1640-xx. Complete the steps in the "Building the Display Shelf Assembly, Product ID CTS3K-M" section on page 5-10.
- Check the attachment hardware for the shelves.

- Display shelves with a product ID of CTS3K-FUR-MAPLE use cam locks, cam lock rods, and plates to attach the sections.
- Display shelves with a product ID of CTS3K-M use draw bolts to attach the sections.

Figure 5-1 shows the attachment hardware differences.

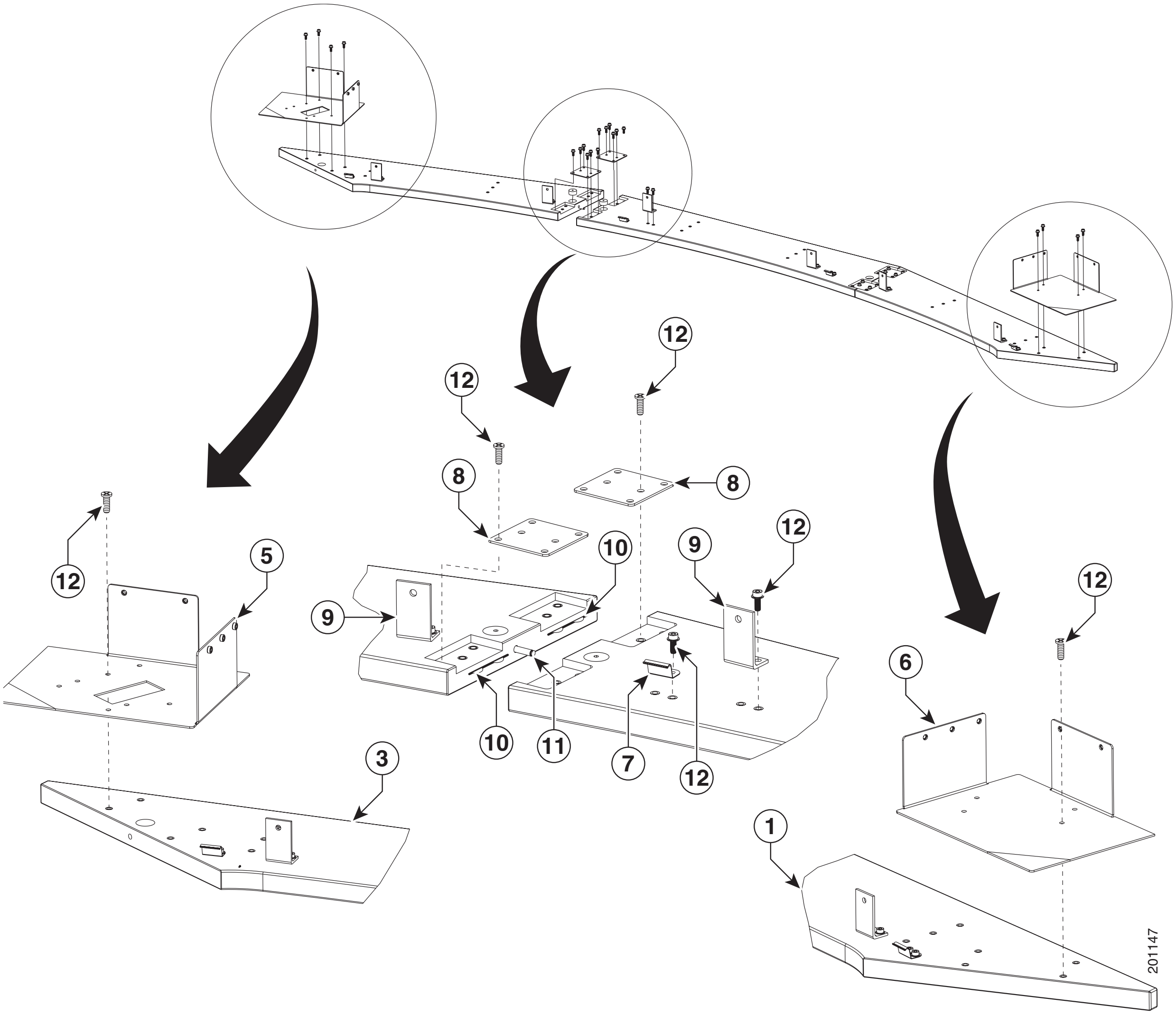
Figure 5-1 Attachment Hardware Differences


12
12
8
8
10
9
12
9
10
11
7
12
A
12
12
8
8
9
12
9
10
11
B
205468

Building the Display Shelf Assembly, Product ID CTS3K-FUR-MAPLE

Step 1 Attach the Display shelf hardware to the display shelves.

Figure 5-2 Display Shelf Hardware

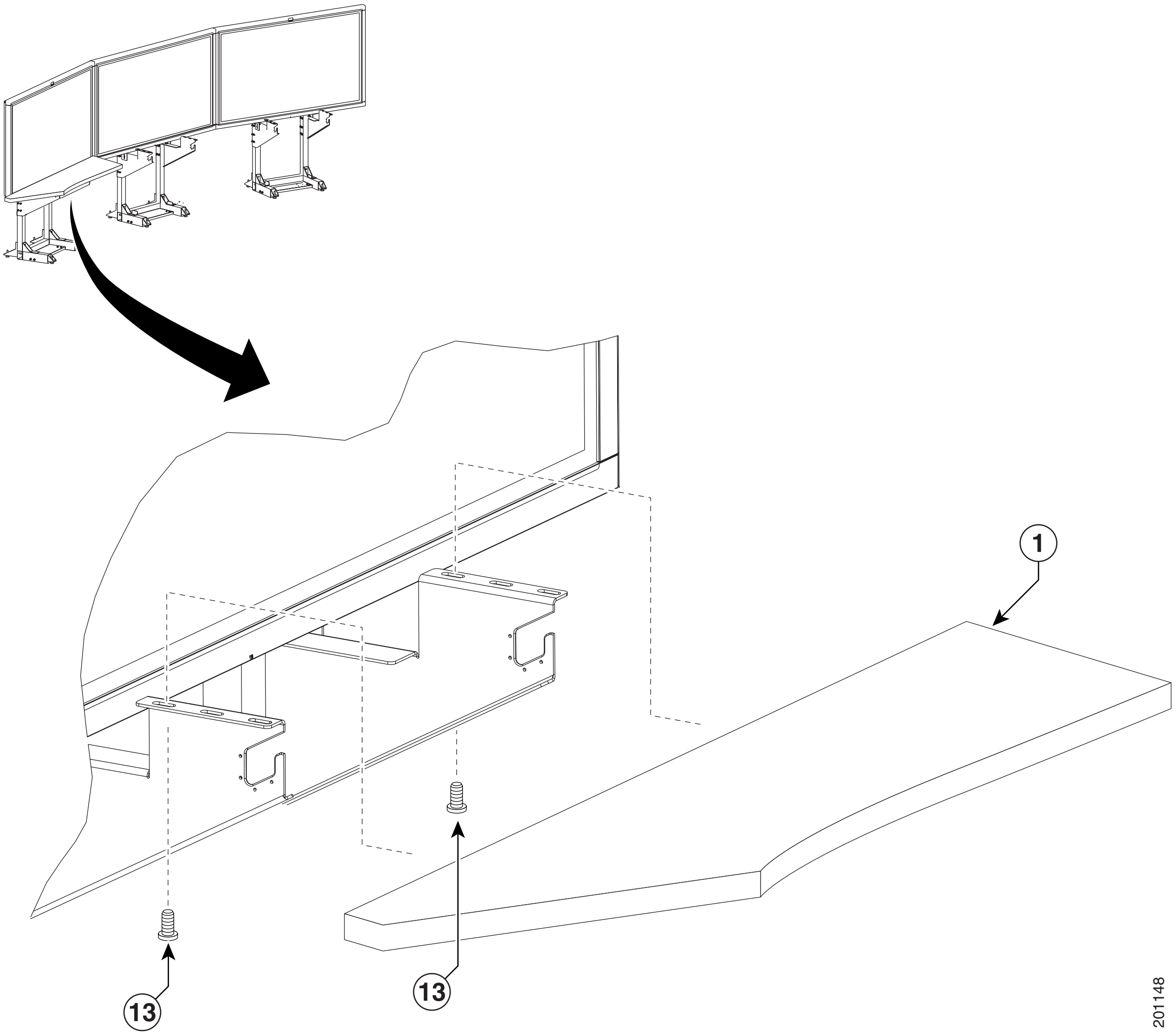


Note The Right Accessory Cabinet attachment bracket (marked "6" in the illustration), has a central rectangular hole that differentiates it from the Left Accessory Cabinet attachment bracket.

Note This illustration describes the hardware used to attach the three Display shelves and the hardware used to attach additional assemblies in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements." The Display shelves should be attached individually to the Display structures, as illustrated in Figure 5-3, Figure 5-4, and Figure 5-5.

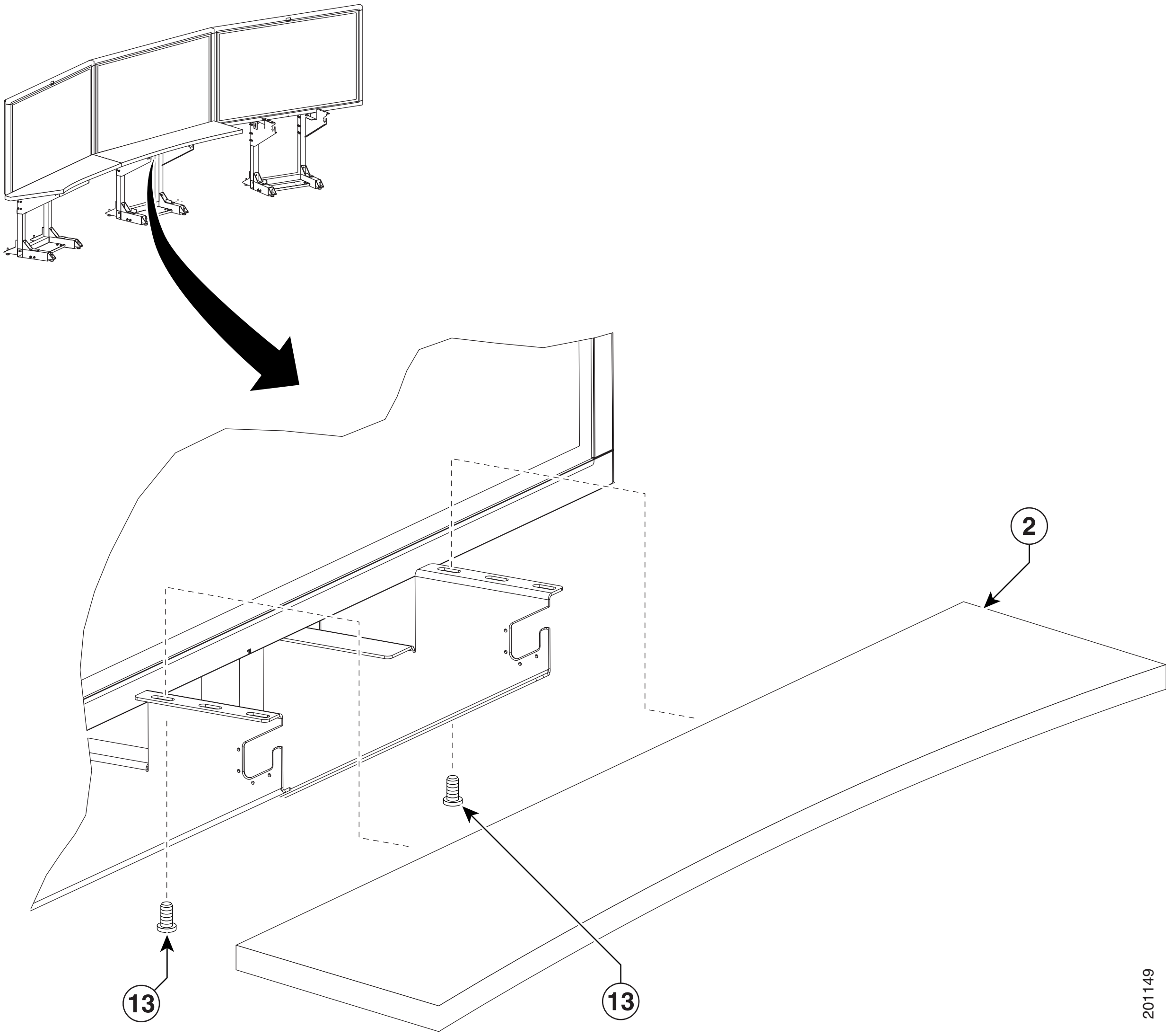
Step 2 Attach the left Display shelf.

Figure 5-3 Left Display shelf



Step 3 Attach the center Display shelf

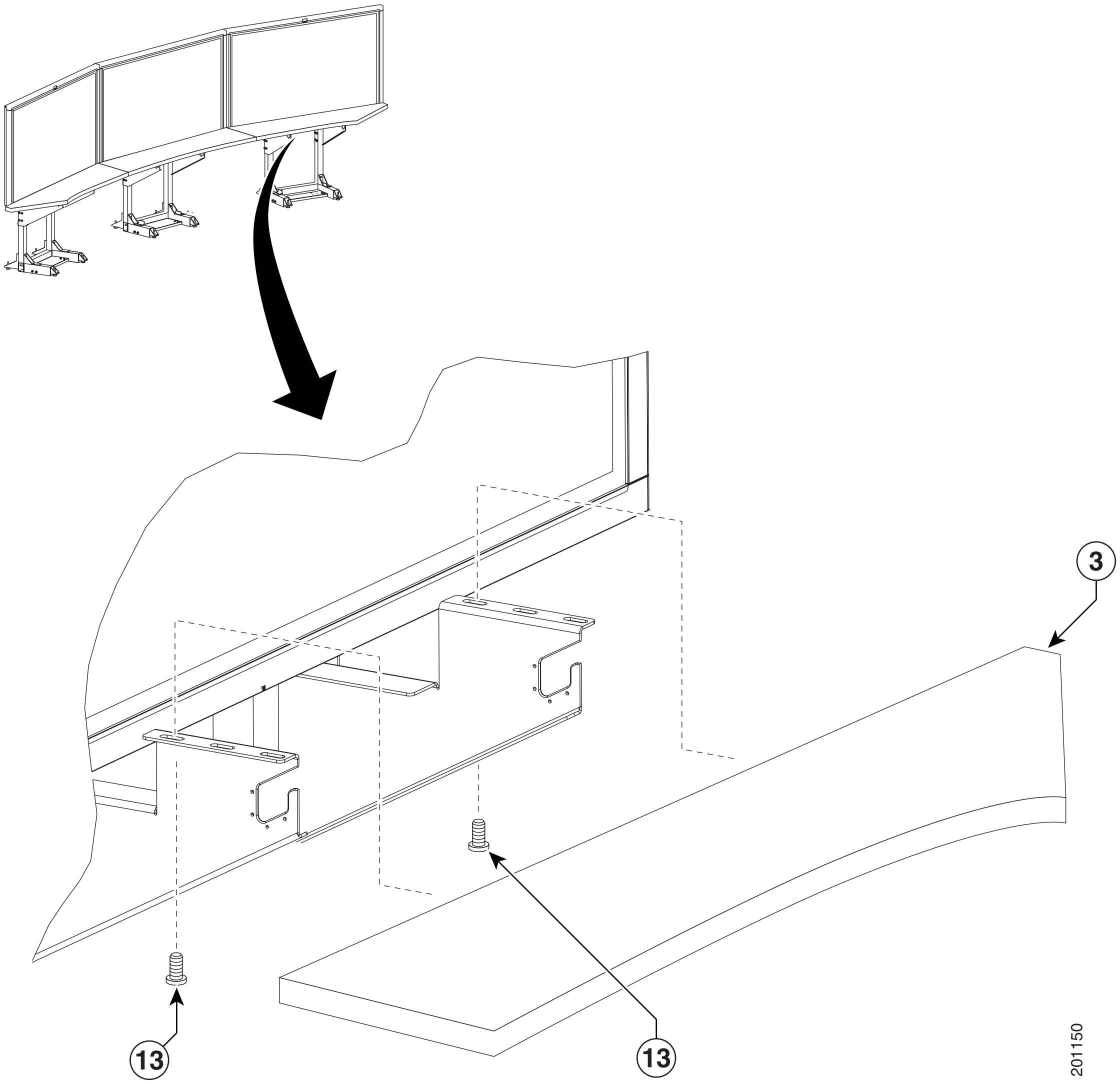
Figure 5-4 Center Display shelf



Note Refer to Figure 5-2 to see the hardware used to attach the center Display shelf to the left Display shelf.

Step 4 Attach the right Display shelf.

Figure 5-5 Right Display shelf

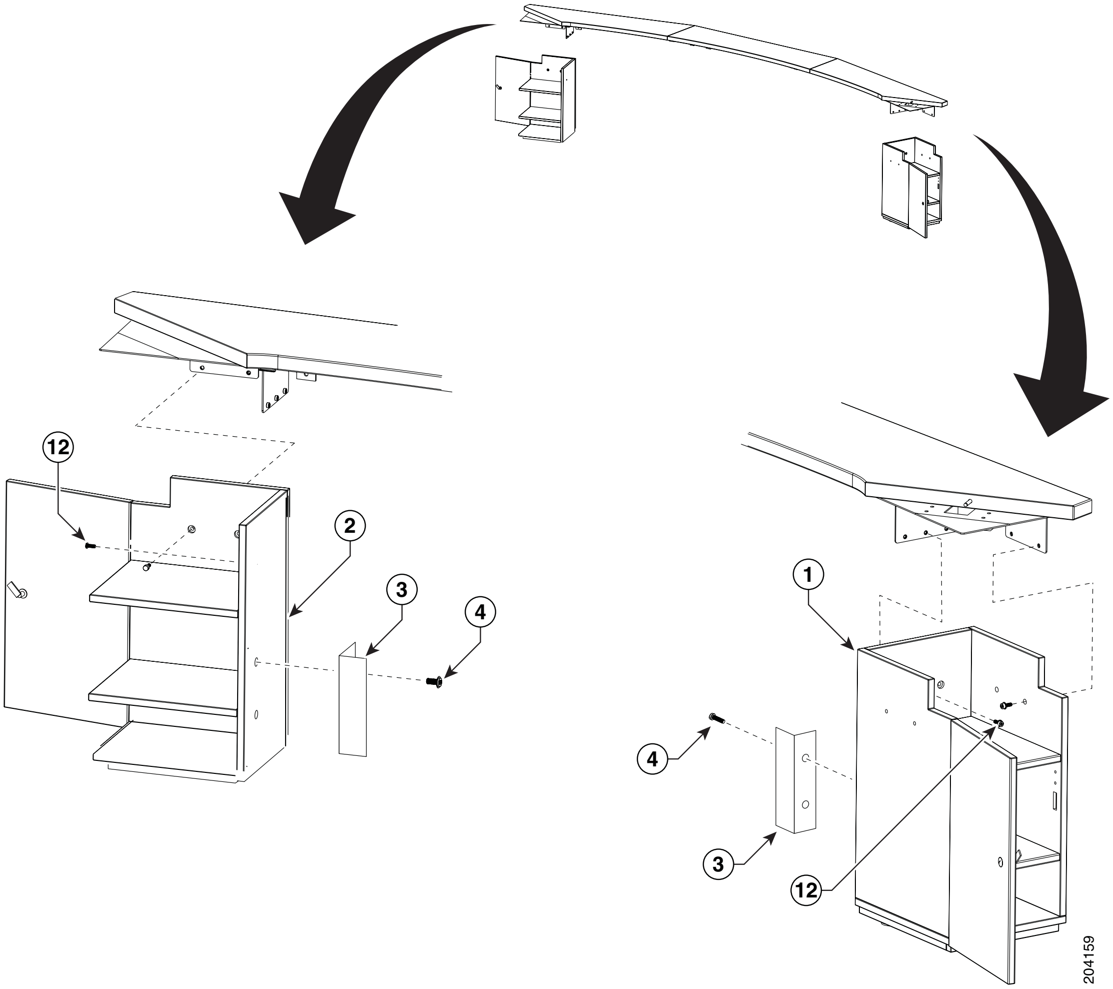


Note Refer to Figure 5-2 to see the hardware used to attach the right Display shelf to the center Display shelf.

Step 5 Attach the screen supports to the accessory cabinets and position, but do not attach, the cabinets to the left and right attachment brackets

These screen supports are only required if you use a Type 1 projector screen, part number 800-28681-xx. If your installation uses the projector screen with a product ID of CTS3K-SCREEN and a part number of 74-5416-xx, do not install these brackets.

Figure 5-6 Accessory Cabinet



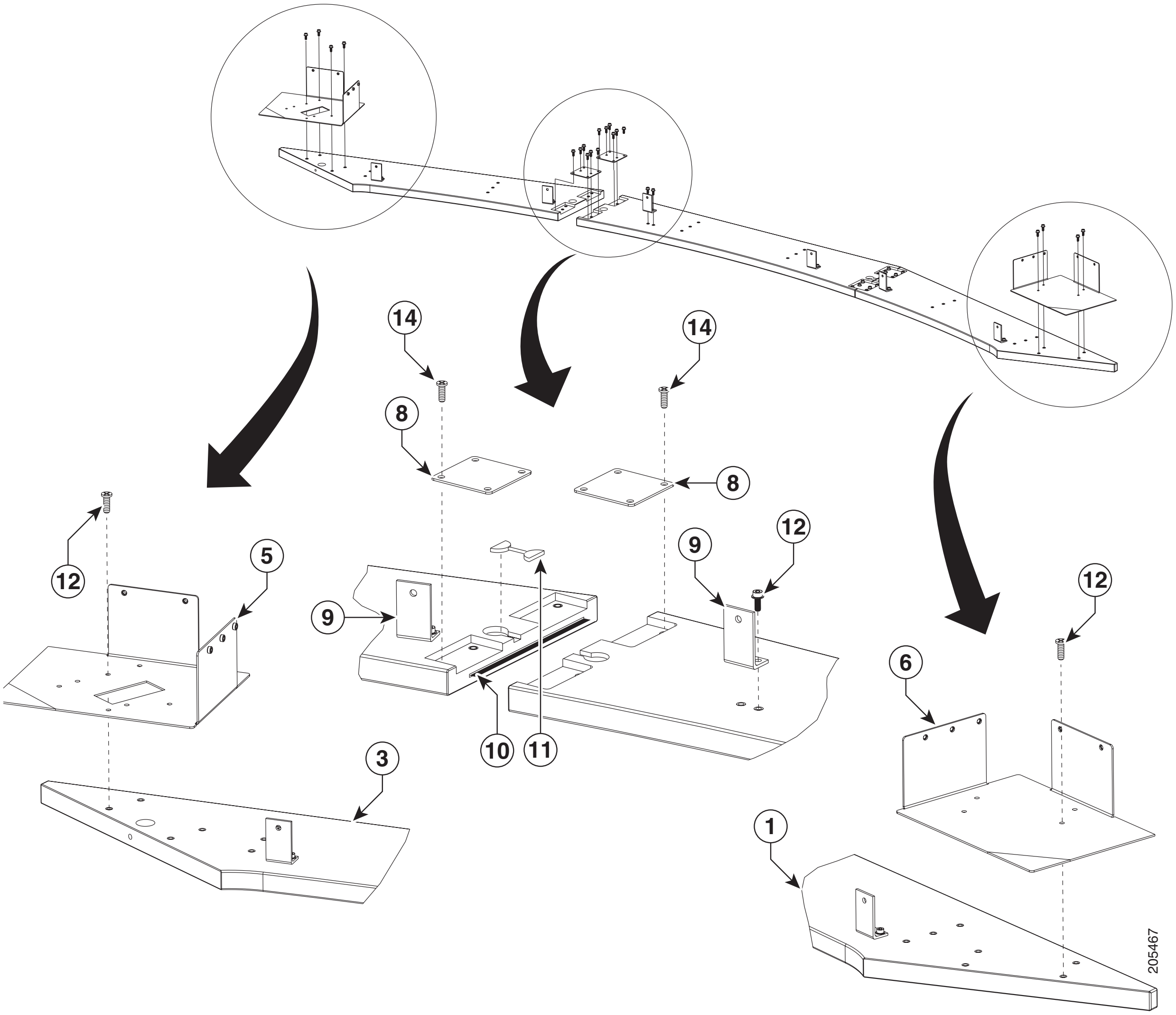
Note One wall of the left Accessory cabinet was removed from this illustration for clarity.

Note Before you attach the Accessory cabinets to the brackets, use them as supports while assembling the table segments in Chapter 6, "Building the Table Assembly."

Building the Display Shelf Assembly, Product ID CTS3K-M

Step 1 Attach the Display shelf hardware to the display shelves.

Figure 5-7 Display Shelf Hardware

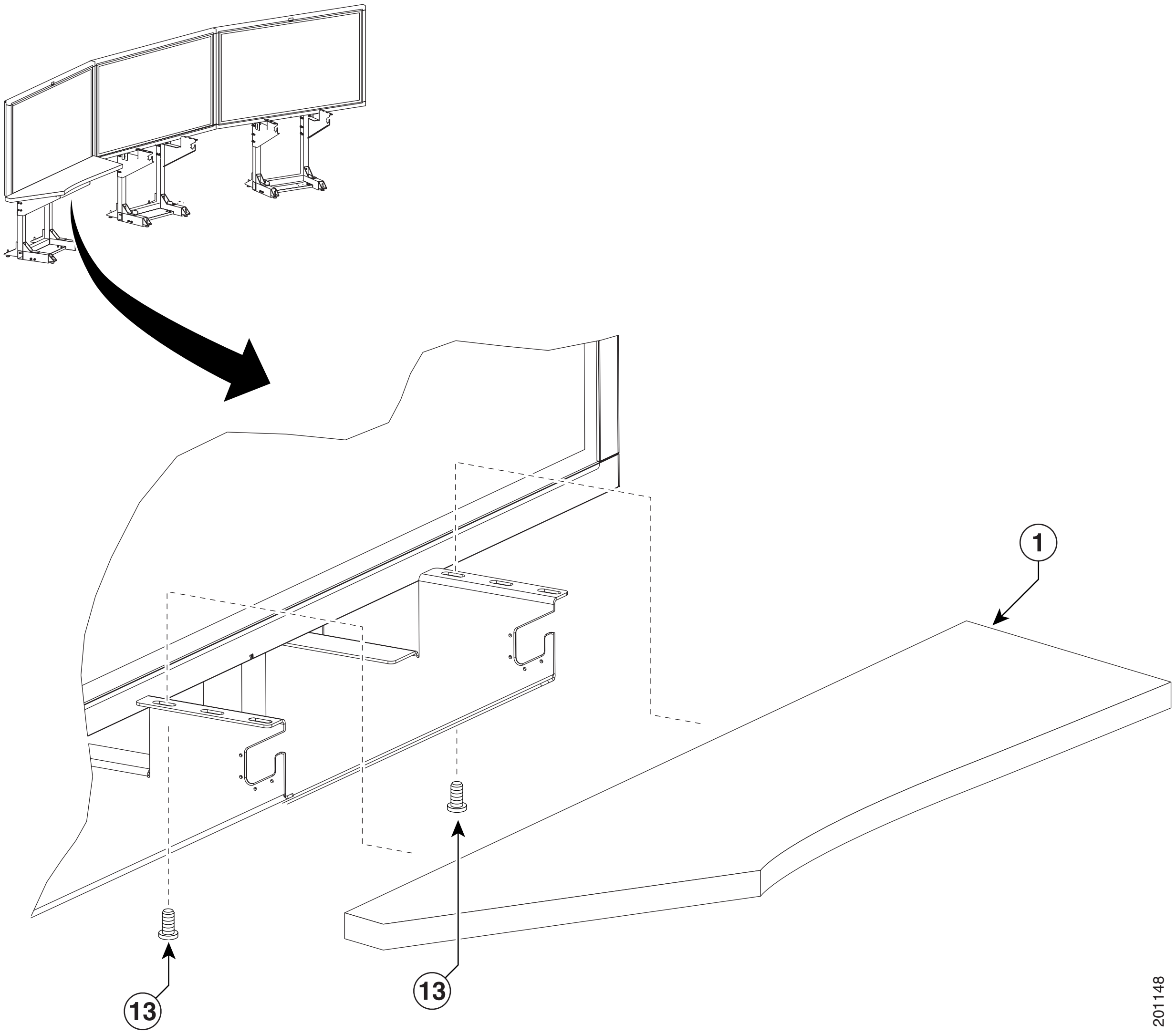


Note The Right Accessory Cabinet attachment bracket (marked “6” in the illustration), has a central rectangular hole that differentiates it from the Left Accessory Cabinet attachment bracket.

Note This illustration describes the hardware used to attach the three Display shelves and the hardware used to attach additional assemblies in Chapter 7, “Assembling the Remaining Cisco TelePresence Elements.” The Display shelves should be attached individually to the Display structures, as illustrated in Figure 5-3, Figure 5-4, and Figure 5-5.

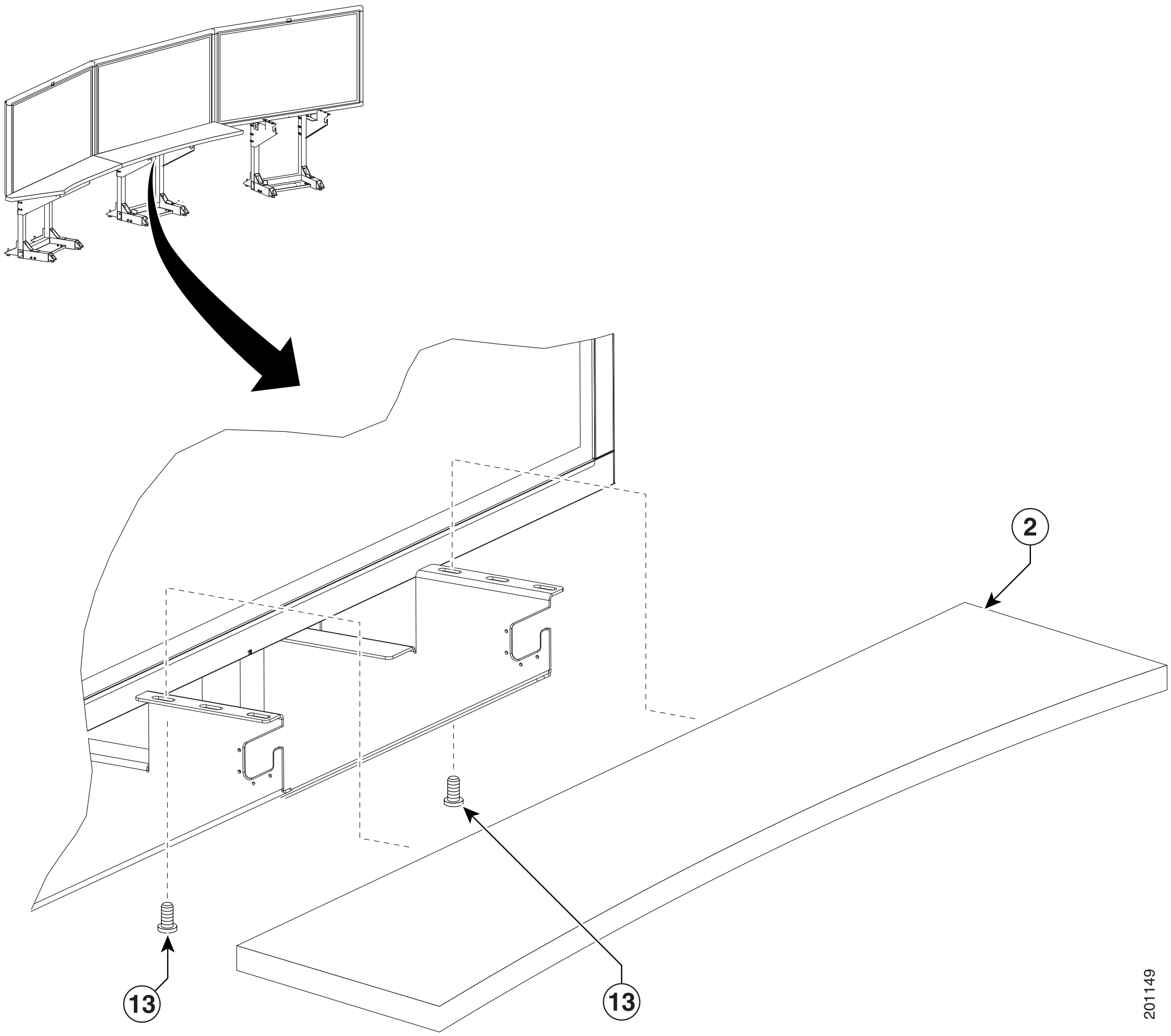
Step 2 Attach the left Display shelf.

Figure 5-8 Left Display shelf



Step 3 Attach the center Display shelf

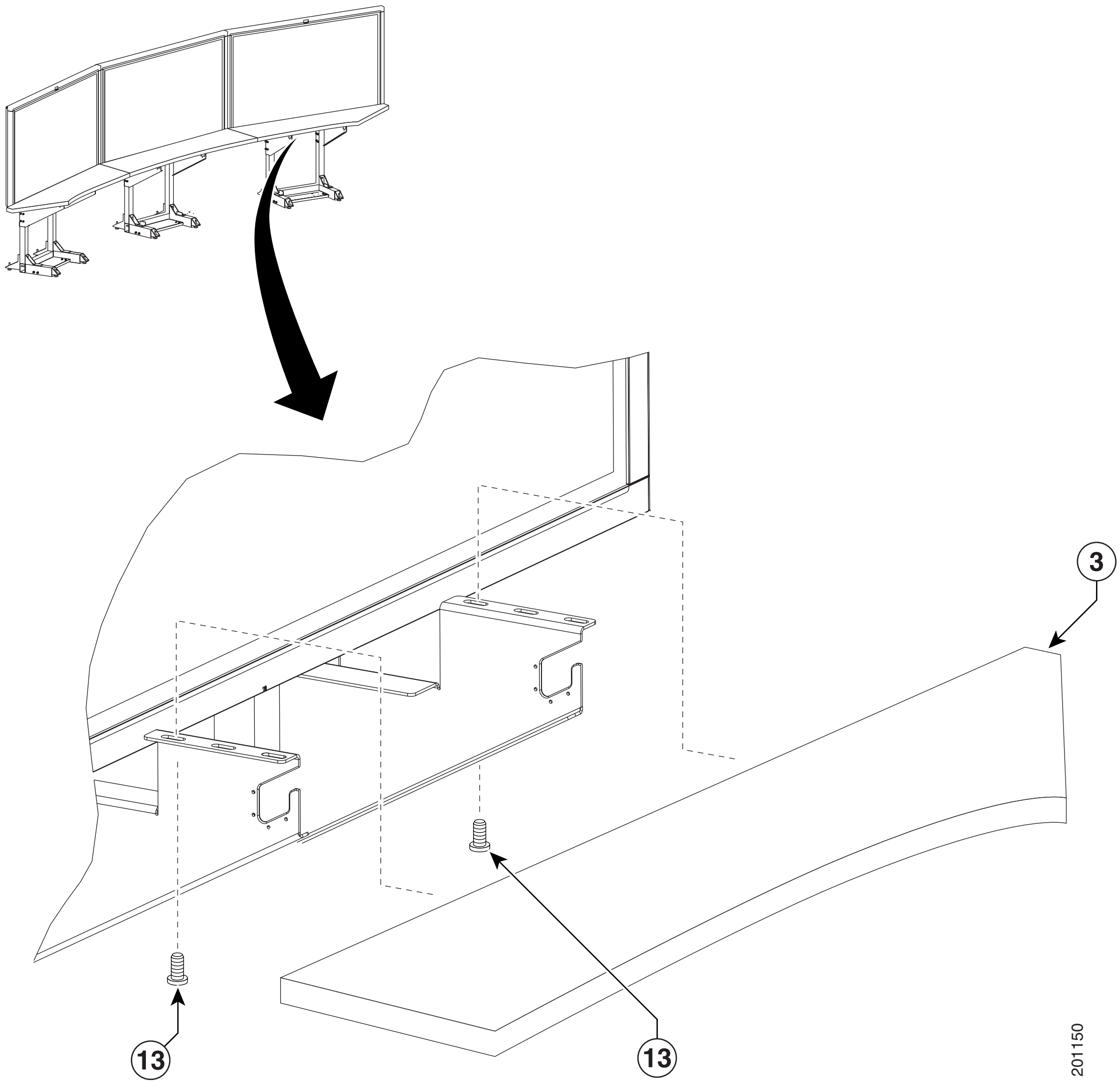
Figure 5-9 Center Display shelf



Note Refer to Figure 5-2 to see the hardware used to attach the center Display shelf to the left Display shelf.

Step 4 Attach the right Display shelf.

Figure 5-10 *Right Display shelf*

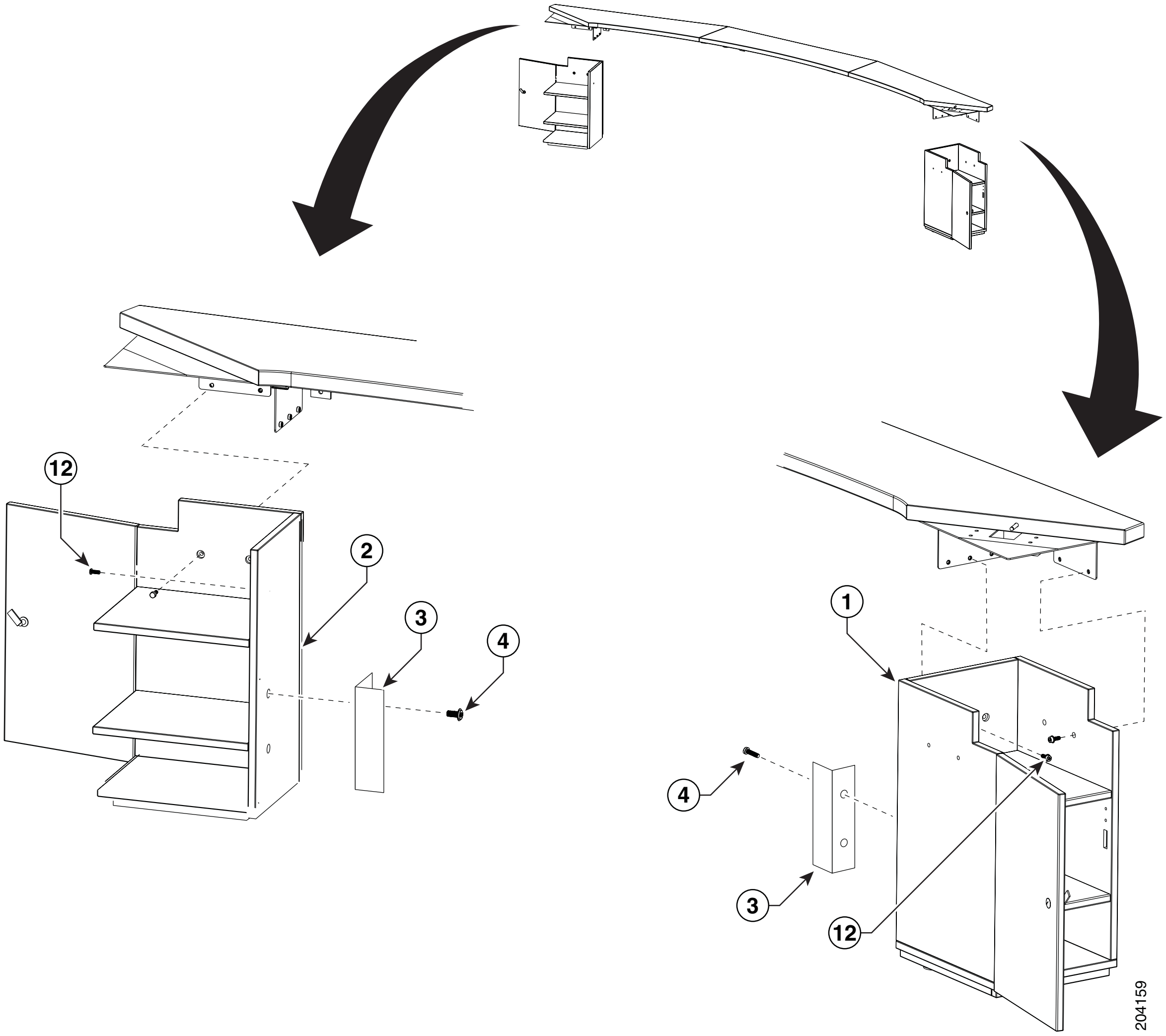


Note Refer to Figure 5-2 to see the hardware used to attach the right Display shelf to the center Display shelf.

Step 5 Attach the screen supports to the accessory cabinets and position, but do not attach, the cabinets to the left and right attachment brackets

These screen supports are only required if you use a Type 1 projector screen, part number 800-28681-xx. If your installation uses the projector screen with a product ID of CTS3K-SCREEN and a part number of 74-5416-xx, do not install these brackets.

Figure 5-11 Accessory Cabinet



Note One wall of the left Accessory cabinet was removed from this illustration for clarity.

Note Before you attach the Accessory cabinets to the brackets, use them as supports while assembling the table segments in Chapter 6, "Building the Table Assembly."

CHAPTER 6

Building the Table Assembly

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
Table Assembly, Product ID CTS3K-FUR-MAPLE					
1	Tabletop leg base	800-28454-xx 800-28628-xx (left)	3 1	41	
2	Metal packaging brace	700-24275-xx	4	25	
3	Molded foam bumper	800-28625-xx	4	25	
4	Tabletop section: right-wing	700-23593-xx	1	45	
5	Tabletop section: center-right	700-23594-xx	1	44	
6	Tabletop section: center	700-23595-xx	1	44	
7	Tabletop section: center-left	700-23596-xx	1	44	
8	Tabletop section: left door	700-23597-xx	1	25	
9	Connecting plate	700-23345-xx	1	12	
10	Wooden biscuits	700-23909-xx	44	44	
11	Left tabletop hinge	51-4539-xx	2	44	
12	Not used		1	1	
13	Cam lock rods	51-4579-xx	6	44	
14	M4 x 12 mm flathead screws	48-1641-xx		1	
15	M4 x 12 mm pan head screws	69-1878-xx 48-2426-xx		1	
16	Phillips head wood screws		8	1	Included with Left tabletop hinge.
17	Cam lock coupling	51-4580-xx	20	1	
18	"Please close" label	47-21001-xx	1	1	
19	Table hinge safety strap	700-23825-xx	1	1	Use the screws included with the strap to attach.

Key	Part Description	Part Number	Qty	Ctn	Notes
Accessory Cabinet					
1	Left accessory cabinet	700-23601-xx	1	42, 43	
2	M8 x 20 mm screws	48-2273-xx	14	1	
3	Not used				
4	Right accessory cabinet	700-23601-xx	1	42, 43	
Miscellaneous Table Items					
	Cabinet hole covers	700-26753-xx	14	1	Use these to cover screw mounting holes in the cabinet body.

Key	Part Description	Part Number	Qty	Ctn	Notes
Table Assembly, Product ID CTS3K-M					
1	Tabletop leg base	800-28454-xx 800-28628-xx (left)	3 1	40	
2	Metal packaging brace	700-24275-xx	4	43	
3	Molded foam bumper	800-28625-xx	4	43	
4	Tabletop section: right wing	95-9690-xx Kit # 74-5302-xx	1	44	
5	Tabletop section: Center right	95-9687-xx Kit # 74-5300-xx	1	44	
6	Tabletop section: center	95-9686-xx Kit # 74-5299-xx	1	44	
7	Tabletop section: Center left	95-9689-xx Kit # 74-5301-xx	1	44	
8	Tabletop section: left door	95-9691-xx Kit # 74-5303-xx	1	44	
9	Connecting plate	700-27292-xx	1	14	
10	Draw bolt	No part number	12	1	
11	Left tabletop hinge	51-4539-xx	1	1	
12	Spline	No part number	5	1	
13	“Please close” label	56-15736-xx		1	
14	M8 x 16 mm screws, black	48-2430-xx	30	1	
15	M4 x 12 mm flathead screws	48-1641-xx		1	
16	Phillips head wood screws		8	1	Included with Left tabletop hinge.
17	Plate for left side table	Part number to be provided	1		Installs on the side closest to the table door.
18	I/O blank: large	700-23806-xx		1	
19	I/O blank: small	700-23807-xx	6	1	

Key	Part Description	Part Number	Qty	Ctn	Notes
20	I/O modules: power/Ethernet	74-xxxx-xx	6	1	Part number changes per country. Refer to Chapter B, "Appendix B: Region- and Country-Specific Equipment" for the part number.
21	I/O Module Cover plate	700-23305-xx		40	
22	10 m Cat6 Ethernet cable	37-0901-xx	6	1	
23	3 m Jumper cord	37-0833-xx	9	1	
24	M4 nuts	49-xx26	20	1	
25	M4 x 12 mm screws, black	48-2426-xx Kit # 69-1878-xx	10	1	
26	Microphone	74-4743-xx	3	1	
27	M4 x 30 mm screws			1	Included in Microphone kit.
28	M4 washers			1	Included in Microphone kit.
29	Table safety hinge		1		
30	M4 x 12 mm pan head screws	69-1878-xx 48-2426-xx	4	21	For connecting plate
Privacy Panel Assembly					
1	Privacy panel: Center left	700-23333-xx	1	58	
2	Privacy panel: center	700-23334-xx	1	58	
3	Privacy panel: Center right	700-23332-xx	1	58	
4	Privacy panel: right wing	700-23362-xx	1	15	
5	M8 x 20 mm screws	48-2273-xx		1	
Accessory Cabinet					
1	Accessory Cabinet, Left	74-5298-xx Kit #69-1838-xx	1	38	
2	M8 x 20 mm screws	48-2273-xx	14	1	
3	Not used				
1	Accessory Cabinet, Right	74-5297-xx Kit # 69-1837-xx	1	37	

Caution The table segments are unstable during assembly. Use caution, and support all structures as required.

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Caution Table elements are heavy, and metal edges can be very sharp. Protect your hands and eyes from injury by wearing safety gloves and glasses.

Caution In order to prevent scratching the table tops, you should avoid putting any tools on the table surfaces.

Note The directions *left* and *right* refer to the assembly as you face it from the front.

Warning **Table legs are unstable until they are fully attached to the tabletop. Do not use unattached table legs as tabletop supports while you attach tabletop segments. They can fall and cause injury or damage. Cisco suggests you use the accessory cabinets to support and stabilize the table segments as you install them.**

Determining the Table Section Type

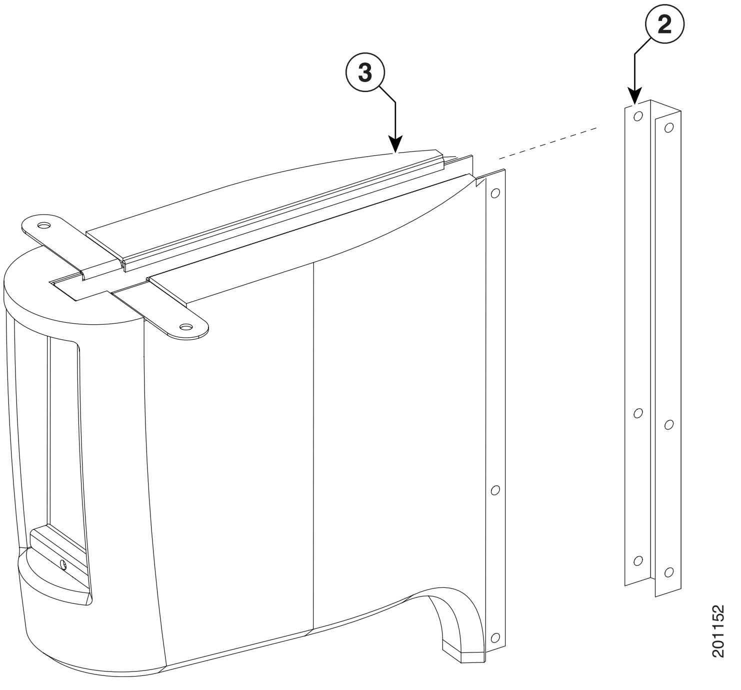
The CTS-3000 ships with two different types of table sections. Determine the type of section that you have by one of the following methods:

- Check the cartons that shipped with your product.
  - Table sections with a product ID of CTS3K-FUR-MAPLE come in a single wooden box and are packed with the other table sections. Complete the steps in the "Building the Table Assembly, Product ID CTS3K-FUR-MAPLE" section on page 6-5.
  - Table sections with a product ID of CTS3K-M are packaged in separate cardboard boxes and one wooden box. The part numbers are 69-1638-xx and 69-1639-xx. Complete the steps in the "Building the Table Assembly, Product ID CTS3K-M" section on page 6-18.
- Check the attachment hardware for the table sections.
  - Table sections with a product ID of CTS3K-FUR-MAPLE use cam locks, cam lock rods, and plates to attach the sections.
  - Table sections with a product ID of CTS3K-M use draw bolts to attach the sections.

Building the Table Assembly, Product ID CTS3K-FUR-MAPLE

Step 1 Remove the Metal packaging braces from the Molded foam bumpers.

Figure 1 *Metal packaging braces and their Molded foam bumpers*

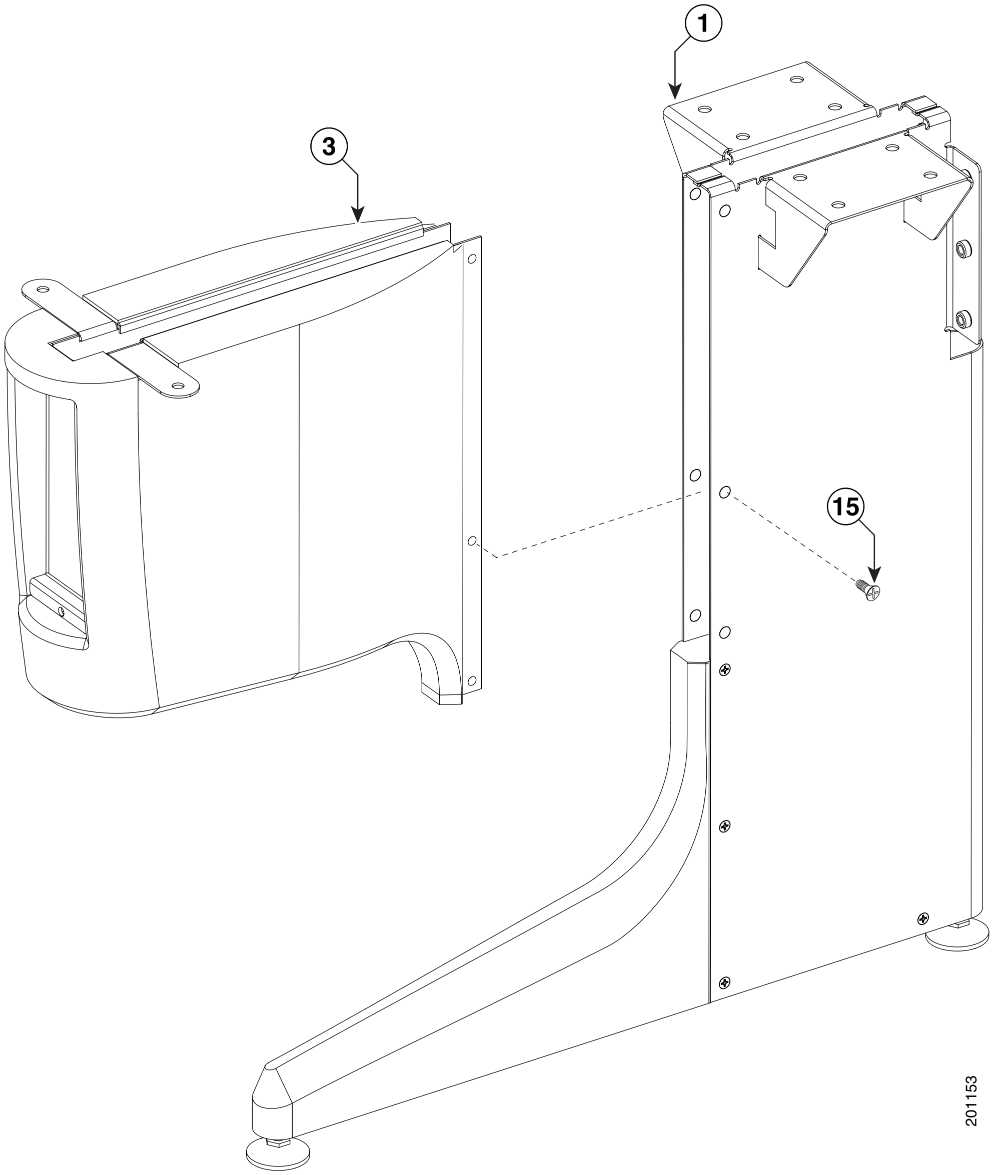


Step 2 Assemble the four Molded foam bumpers and the four Table leg bases.

Note The leg base with only one top right attachment bracket is the left-wing leg (see Figure 10). The other three legs each have two attachment brackets.

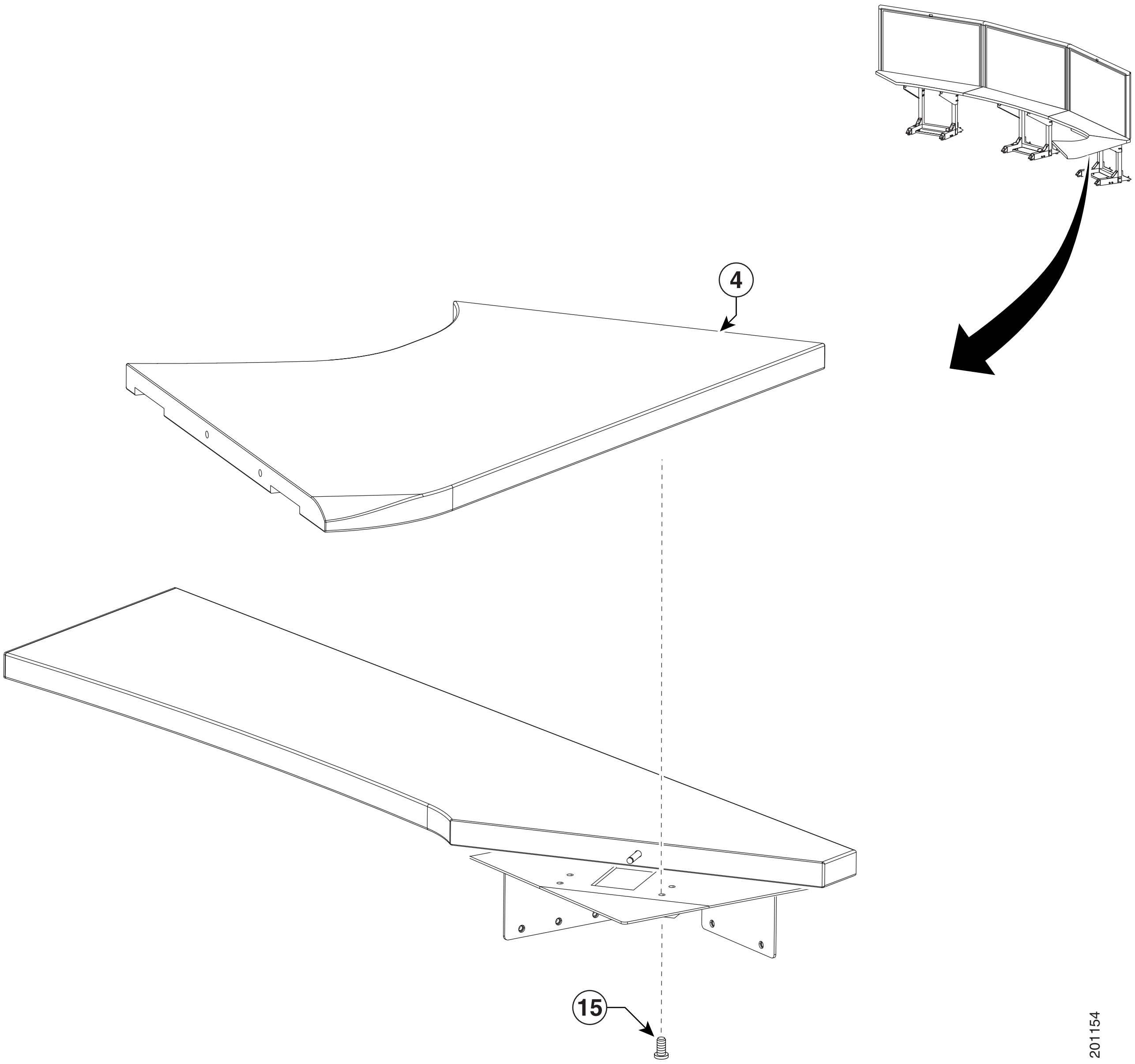
Note Steps for installing all the power and signal cables are in Chapter 7, "Assembling the Remaining Cisco TelePresence Elements.". Steps for routing the cables are in Chapter 8, "Routing Power and Signal Cables."

Figure 2 Four Molded foam bumpers and the four Table leg bases



Step 3 Attach the Right-wing tabletop section to the right Accessory Cabinet bracket.

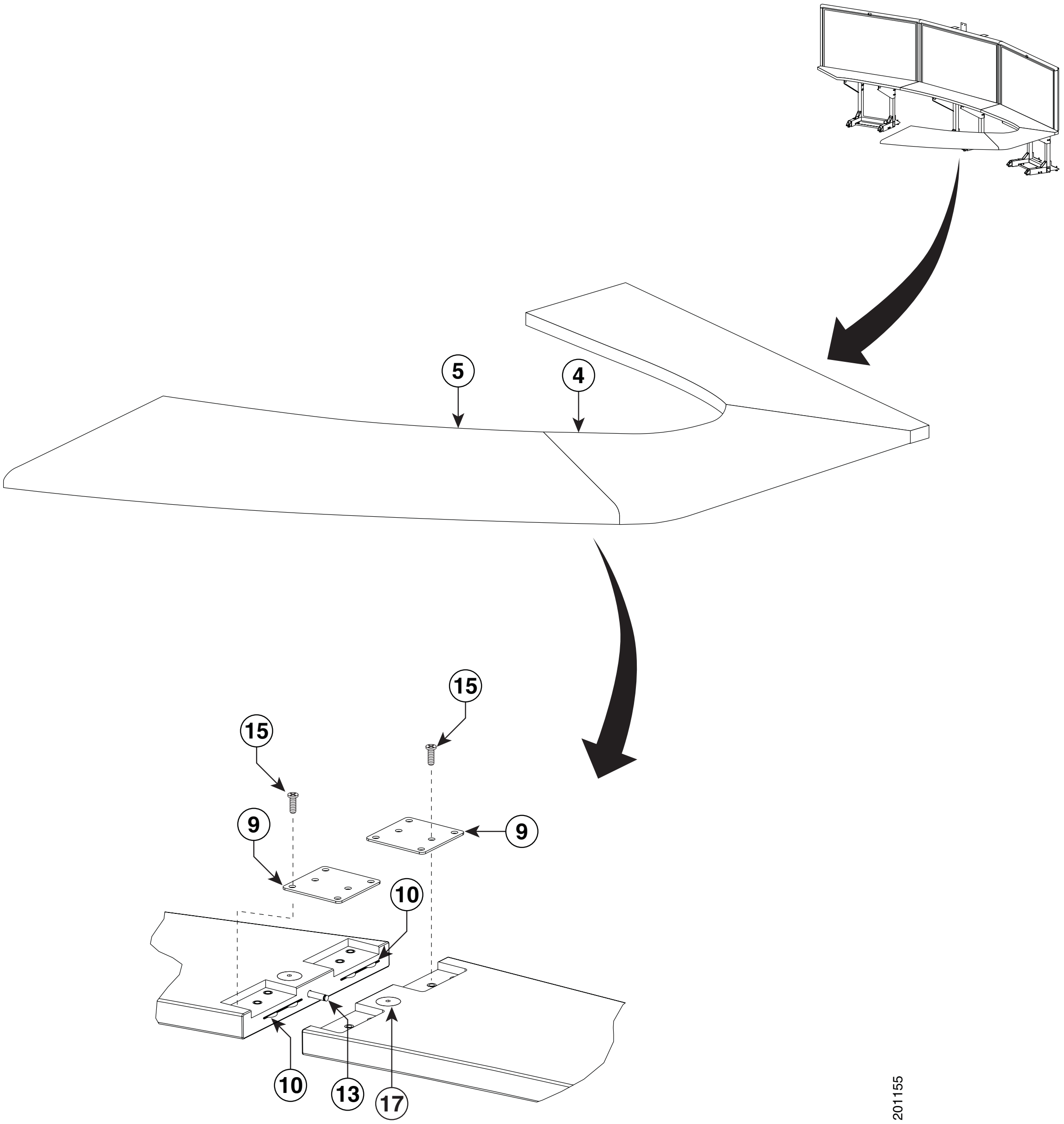
Figure 3 ***Right-wing tabletop section***



Step 4 Attach the right Table segment.

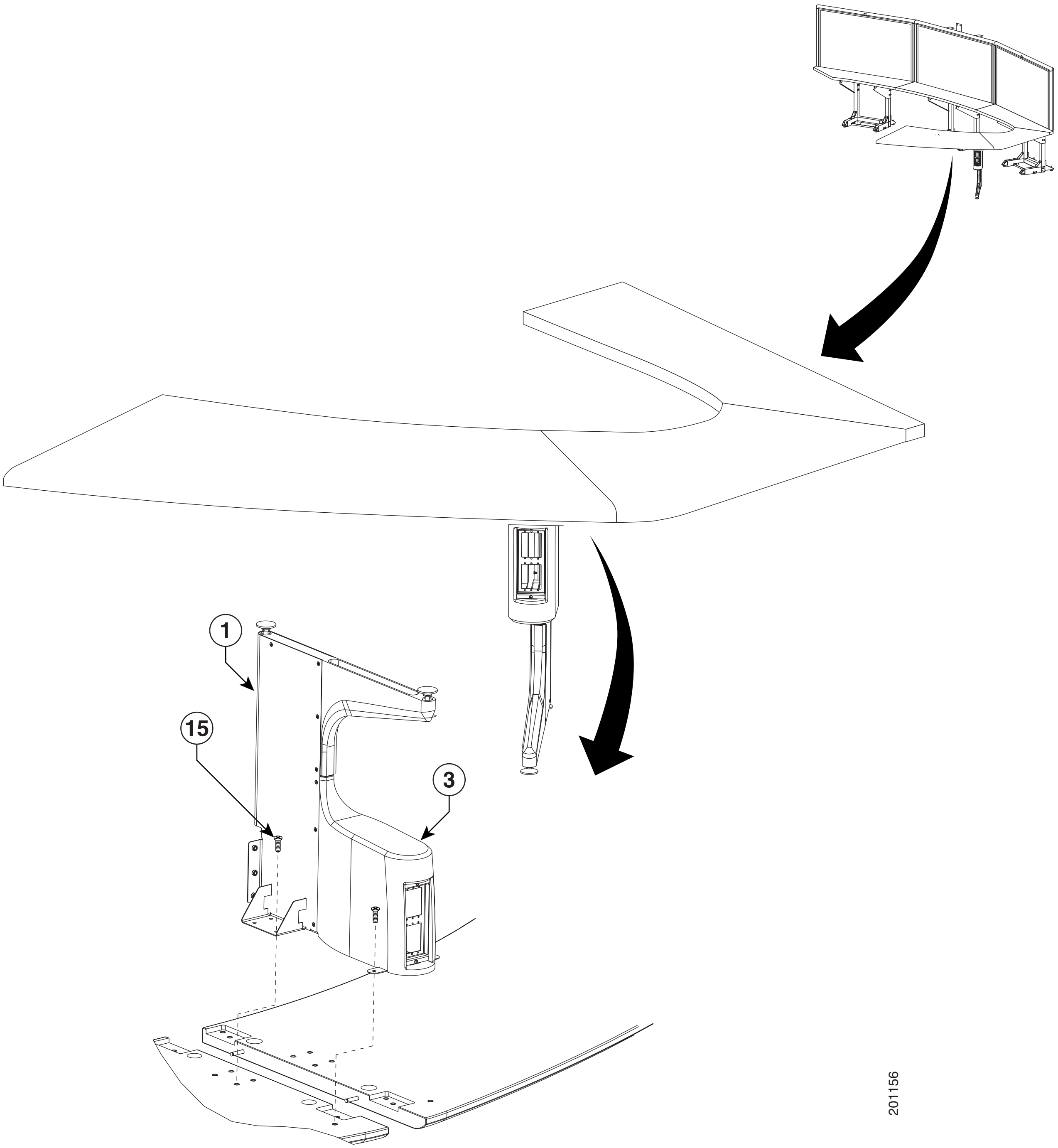
- **a.** Cam Lock rods have two adjustable halves that screw into a center piece. Make sure you screw the two halves of the Cam Lock rod equally into the center piece, so both halves are of equal length when inserted into the Cam Lock in each Table segment.
- **b.** While a cam lock coupling is being tightened, hold the table edges together to avoid damage to the cam lock or the table segment.
- **c.** Use an Allen wrench to tighten the cam lock coupling so the two table segments are connected snugly.
- **d.** While one person is tightening the cam lock couplings from below, it is important for the support person to maintain the alignment of the table segment edges.

Figure 4 Right Table segment



Step 5 Attach the right-most Table Leg.

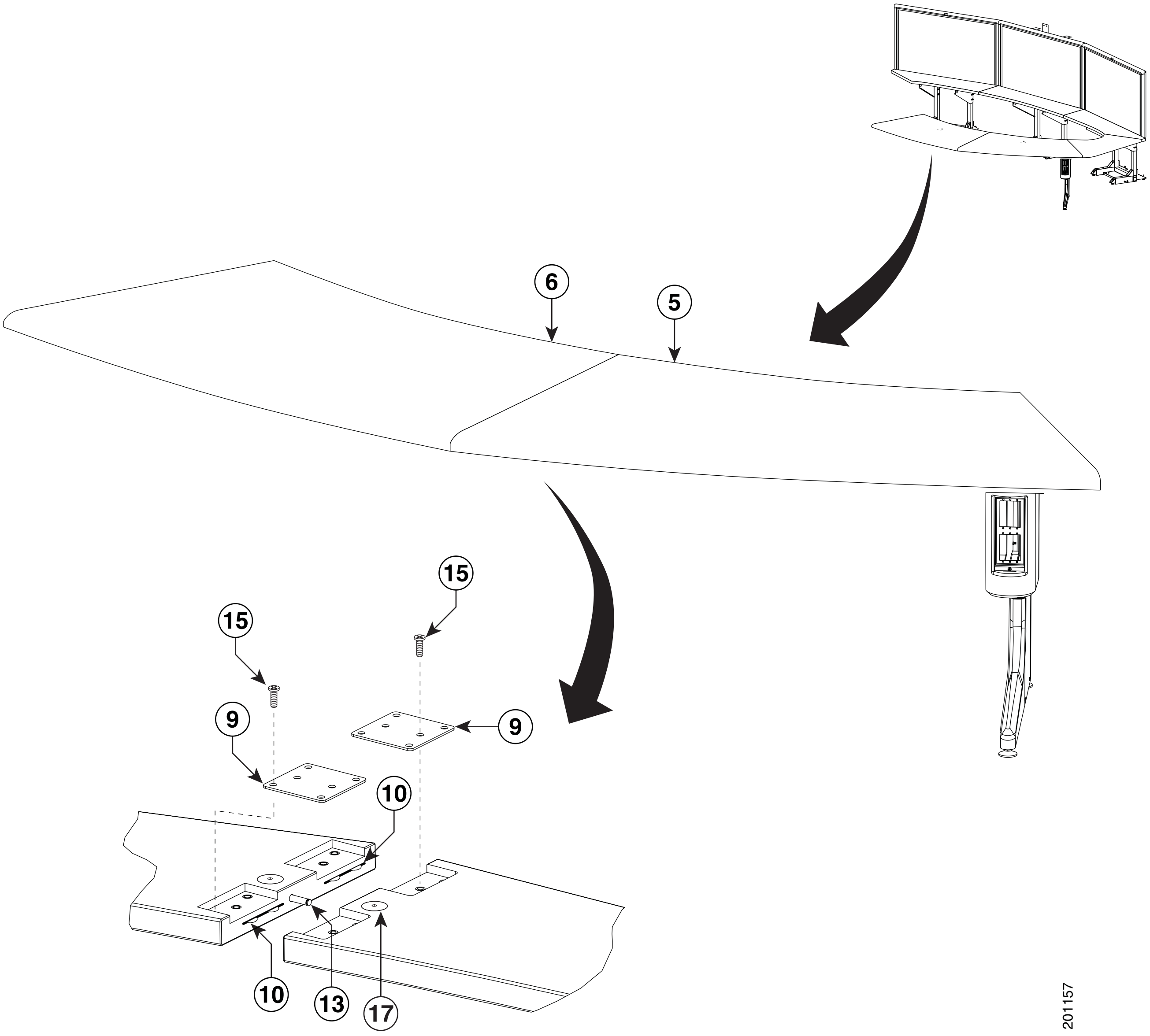
Figure 5 *Right-most Table Leg*



Step 6 Attach the center Table segment.

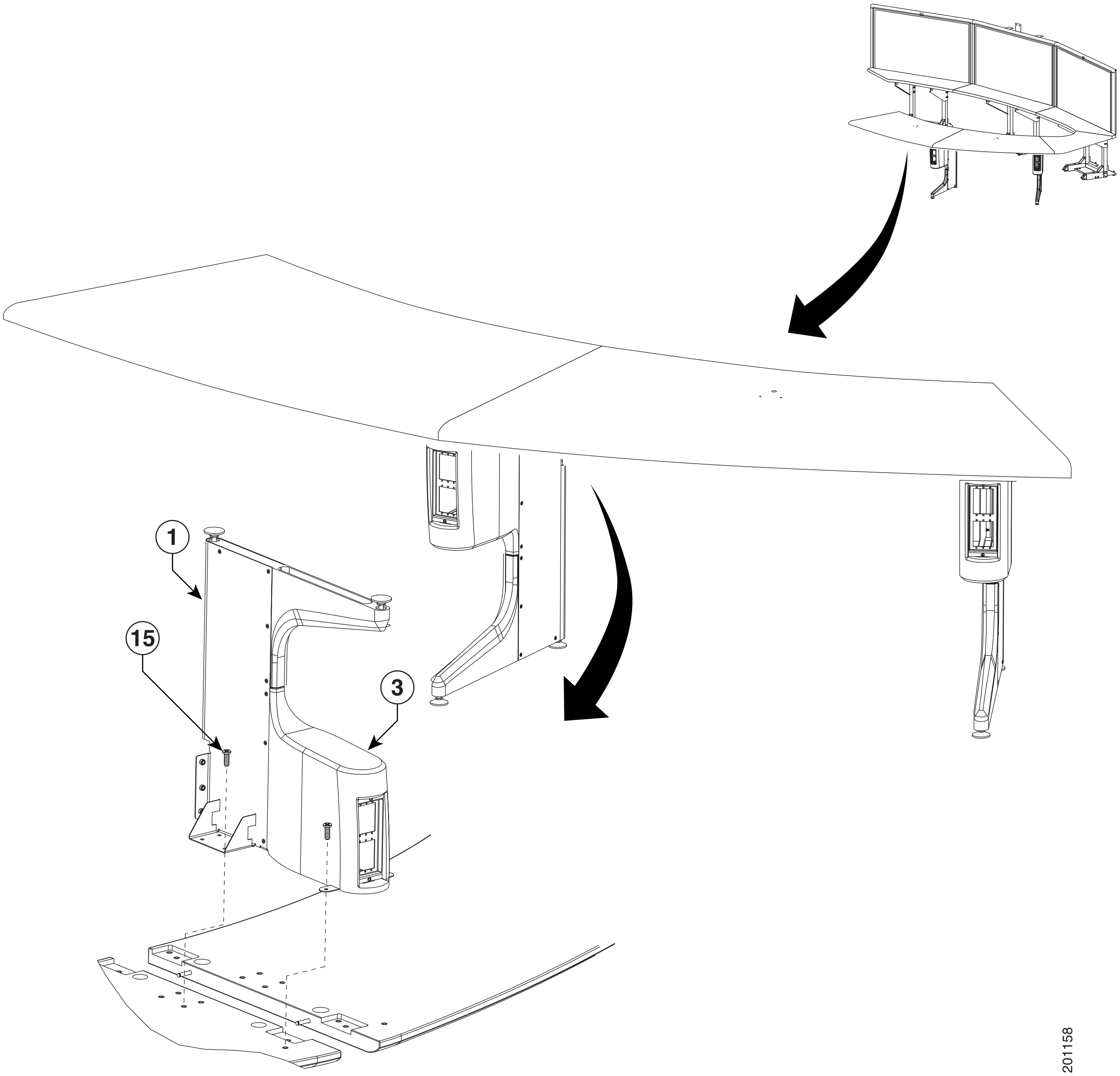
- **a.** Cam Lock rods have two adjustable halves that screw into a center piece. Make sure you screw the two halves of the Cam Lock rod equally into the center piece, so both halves are of equal length when inserted into the Cam Lock in each Table segment.
- **b.** While a cam lock coupling is being tightened, hold the table edges together to avoid damage to the cam lock or the table segment.
- **c.** Use an Allen wrench to tighten the cam lock coupling so the two table segments are connected snugly.
- **d.** While one person is tightening the cam lock couplings from below, it is important for the support person to maintain the alignment of the table segment edges.

Figure 6 Center Table segment



Step 7 Attach the Right-center Table leg.

Figure 7 Right-center Table leg



Step 8 Attach the left Table segment.

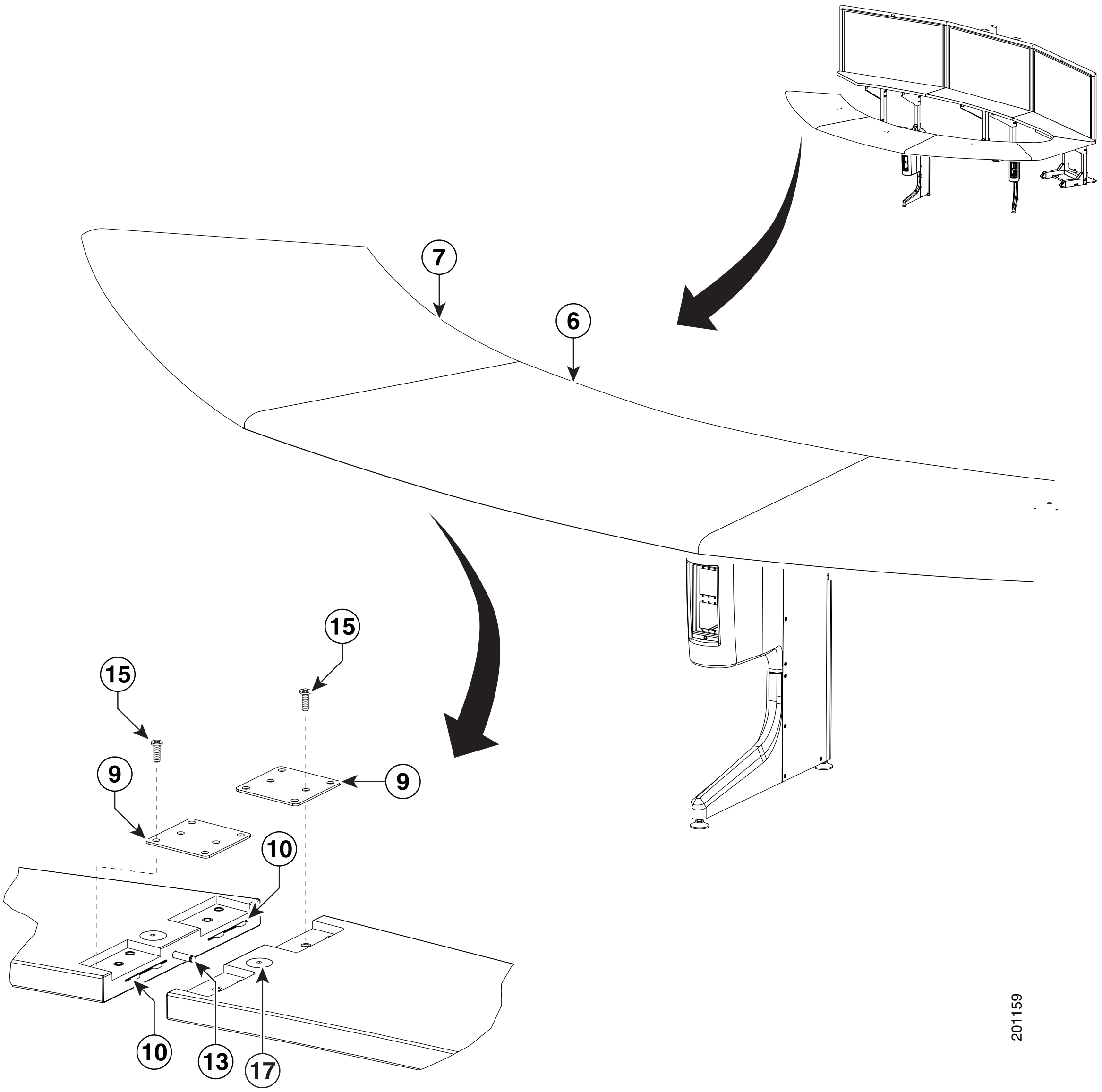
a. Cam Lock rods have two adjustable halves that screw into a center piece. Make sure you screw the two halves of the Cam Lock rod equally into the center piece, so both halves are of equal length when inserted into the Cam Lock in each Table segment.

b. While a cam lock coupling is being tightened, hold the table edges together to avoid damage to the cam lock or the table segment.

c. Use an Allen wrench to tighten the cam lock coupling so the two table segments are connected snugly.

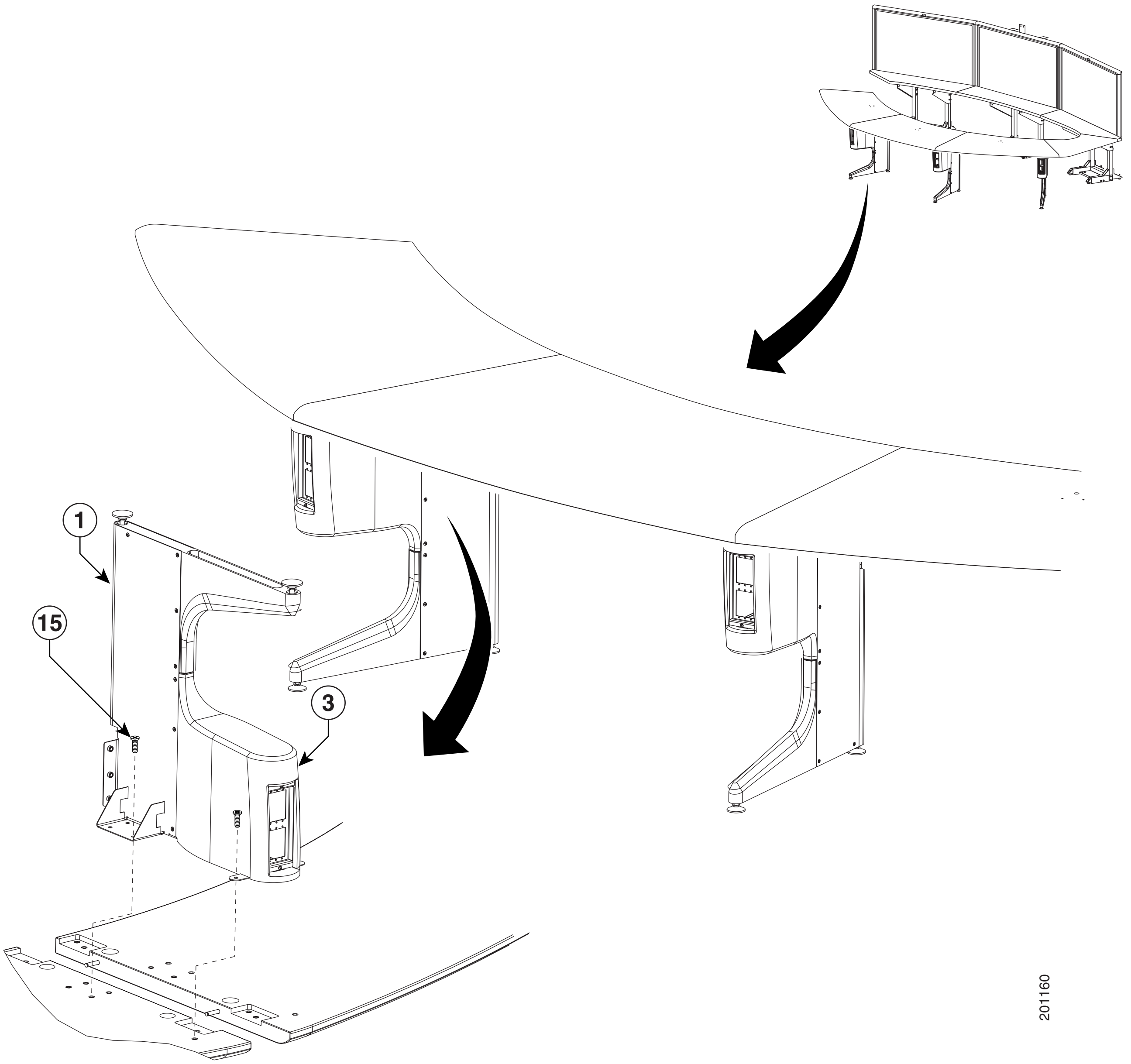
d. While one person is tightening the cam lock couplings from below, it is important for the support person to maintain the alignment of the table segment edges.

Figure 8 Left Table segment



Step 9 Attach the left center Table leg.

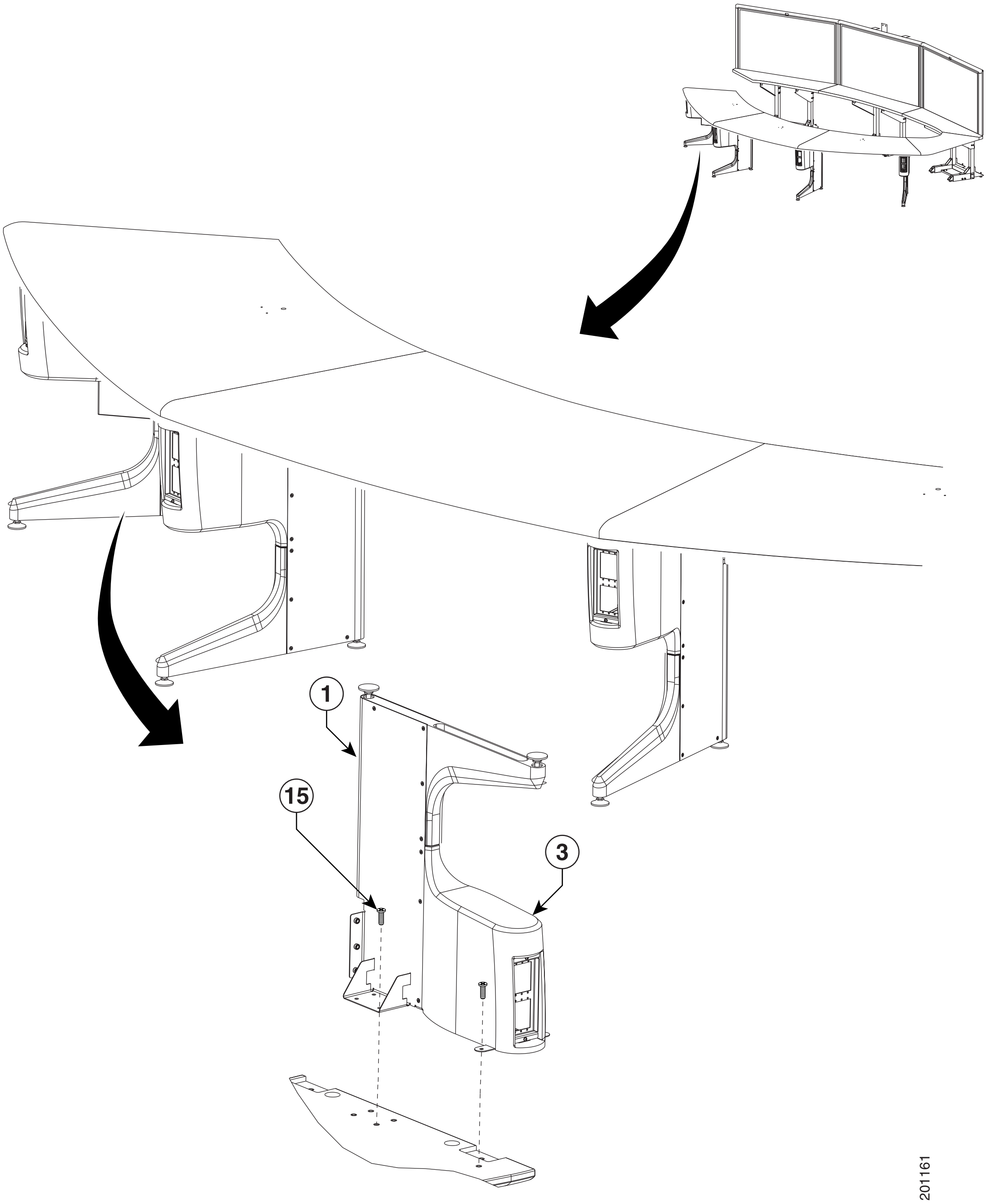
Figure 9 *Left center Table leg*



Step 10 Attach the left-most Table leg.

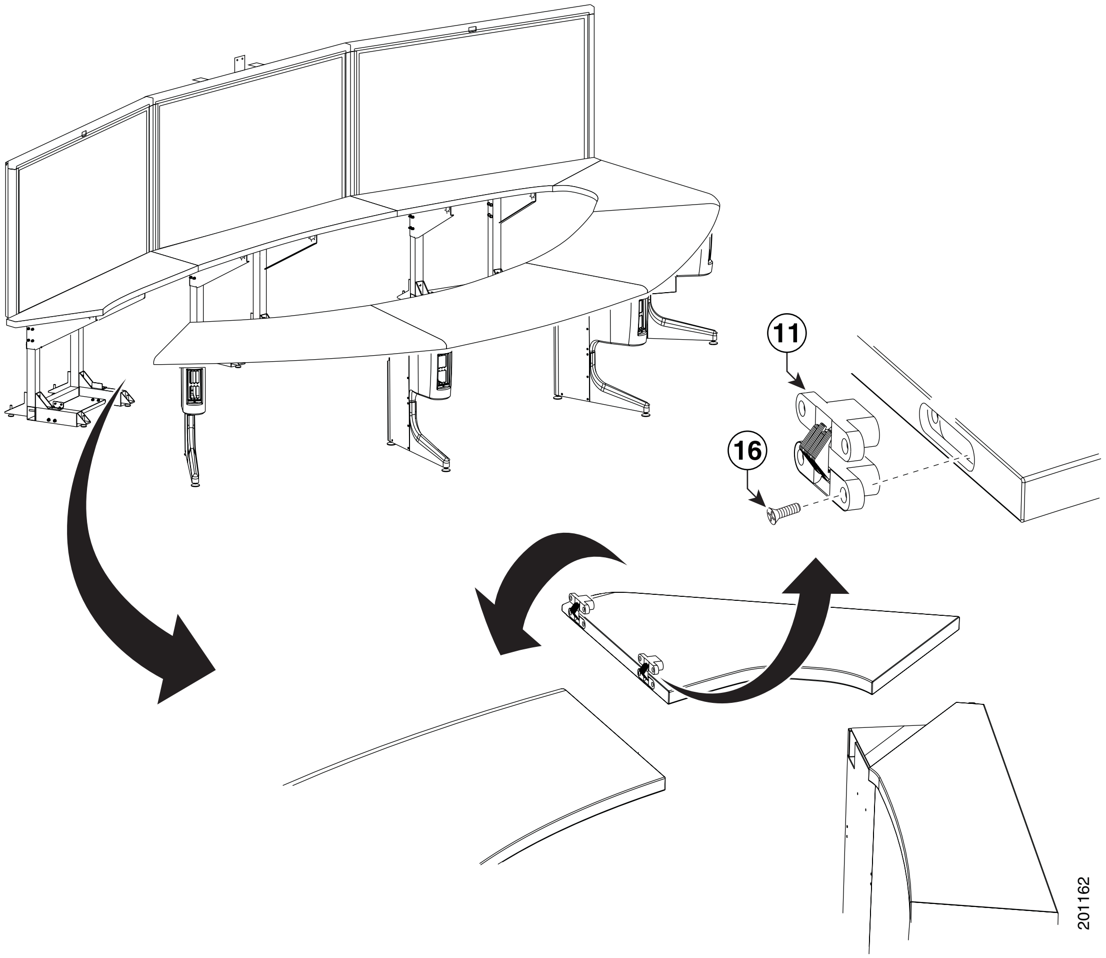
Note The left-most Table leg is different from the other three table legs. It has only one flange on the right side of the leg, to attach to the left Table segment.

Figure 10 Left-most Table leg



Step 11 Attach the table door.

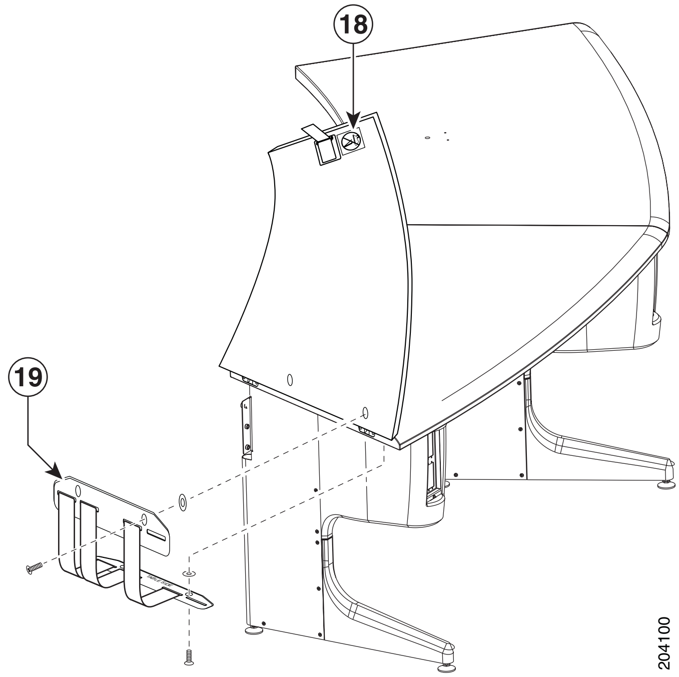
Figure 11 Table Door



Step 12 Using scissors, completely remove one of the four webbed belts from the table hinge safety strap using Figure 12 as a reference; then, install the safety strap and the "please close" label to the table door.

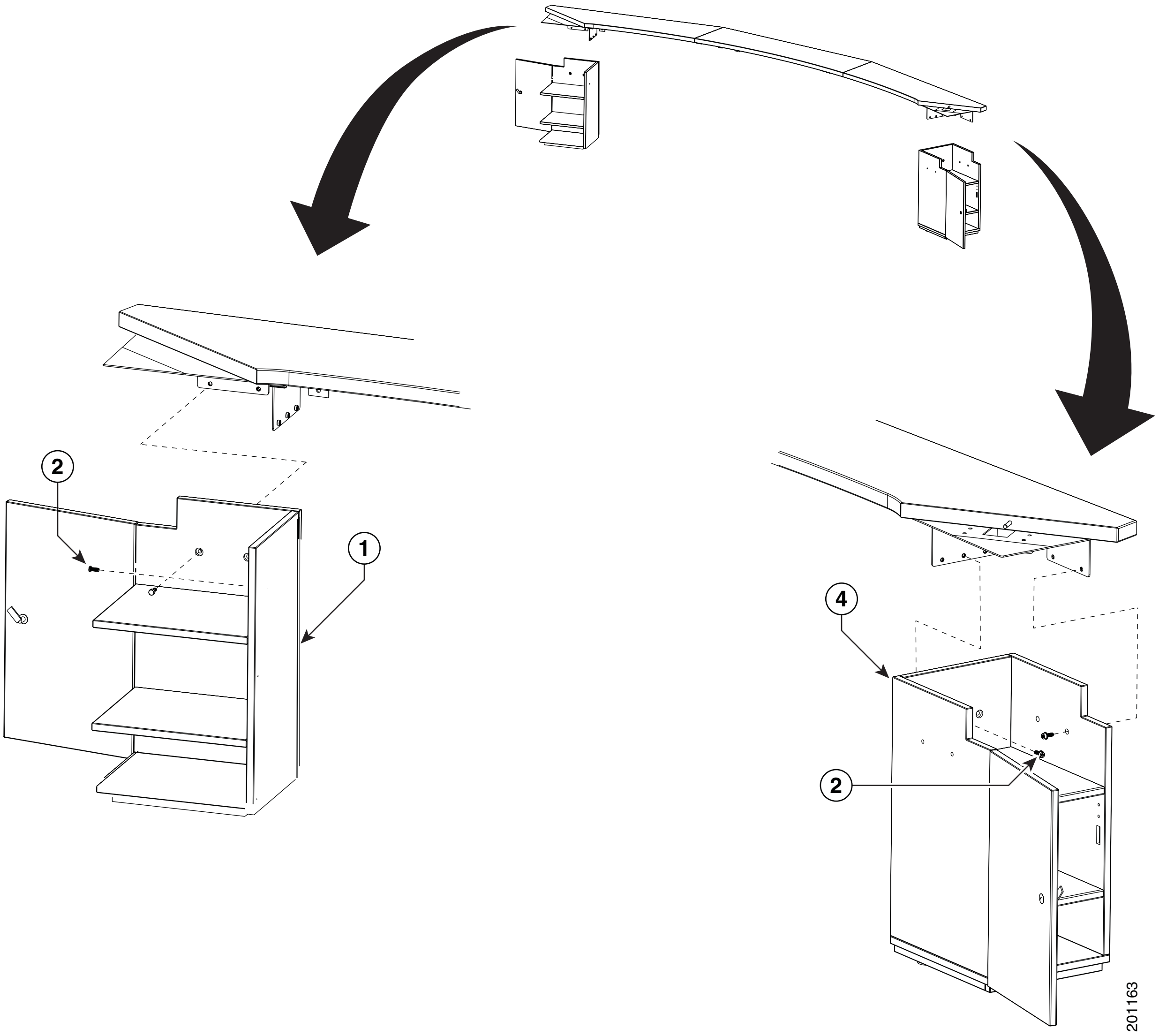
Note When installed, the text on the metal part of the safety strap faces the table and door.

Figure 12 Label and Safety Strap



Step 13 Attach the Accessory cabinets to the left and right attachment brackets and cover the visible screw holes in the cabinet body with the cabinet hole cover.

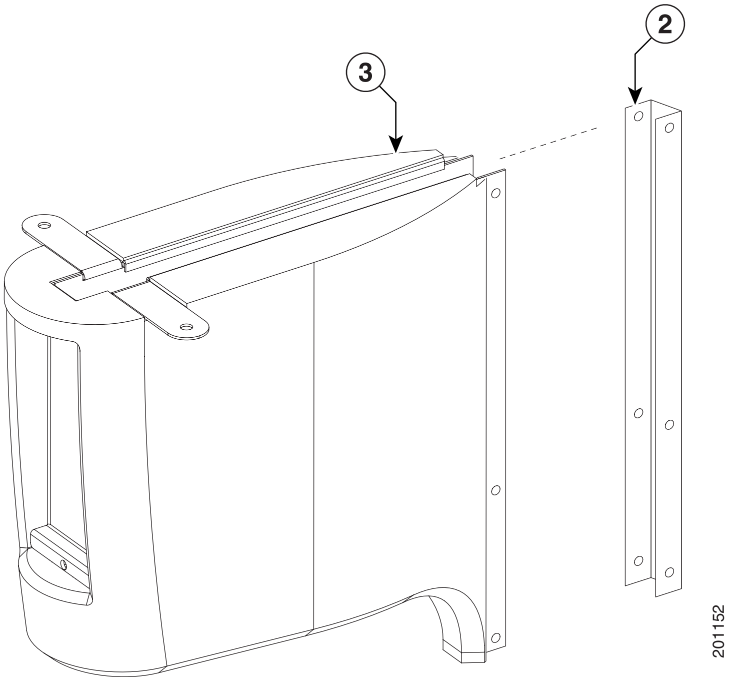
Figure 13 Accessory cabinets



Building the Table Assembly, Product ID CTS3K-M

Step 1 Remove the Metal packaging braces from the Molded foam bumpers.

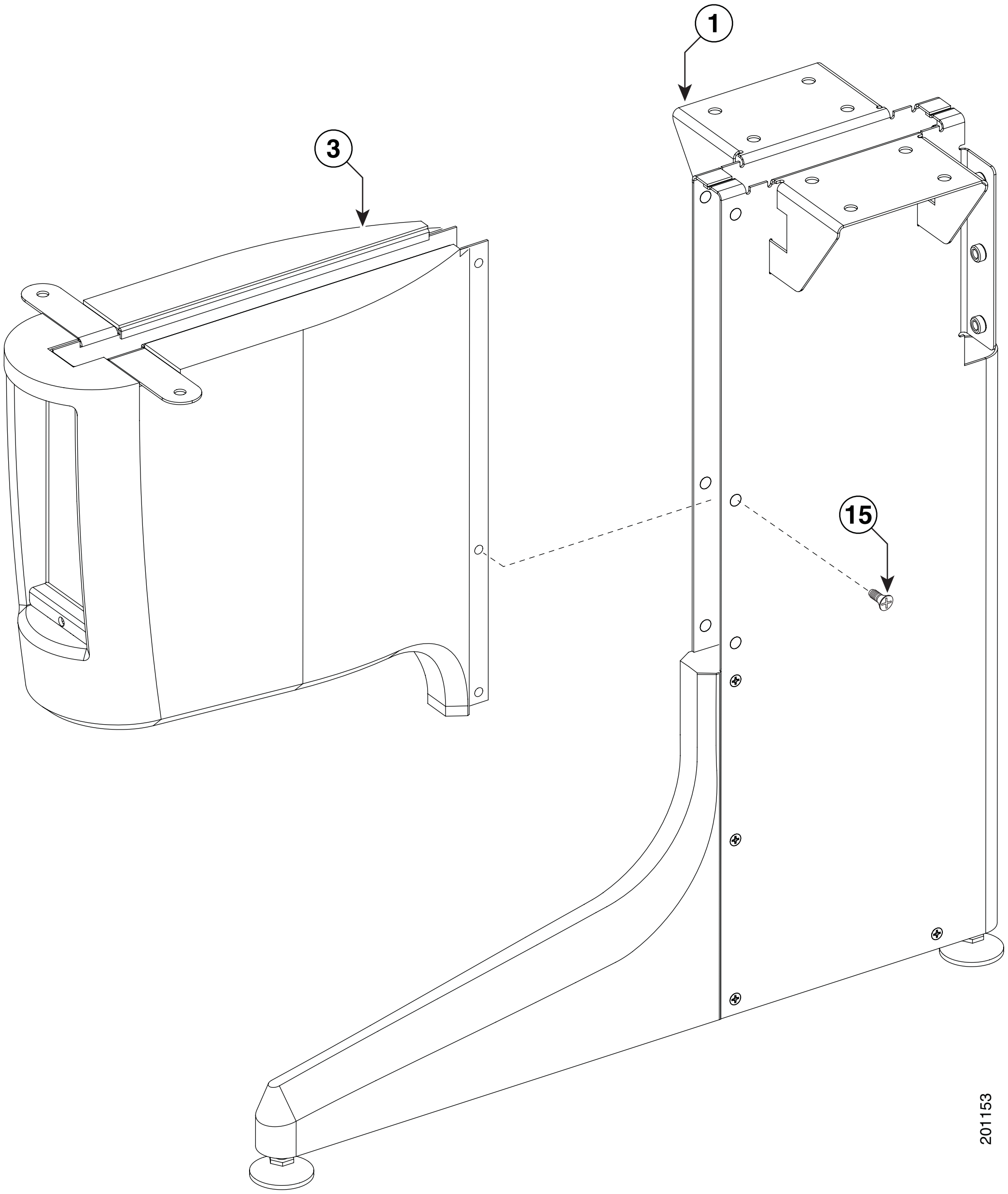
Figure 14 Metal packaging braces and their Molded foam bumpers



Step 2 Assemble the four Molded foam bumpers and the four Table leg bases.

Note The leg base with only one top right attachment bracket is the left most table leg (see Figure 25). The other three legs each have two attachment brackets.

Figure 15 Four Molded foam bumpers and the four Table leg bases



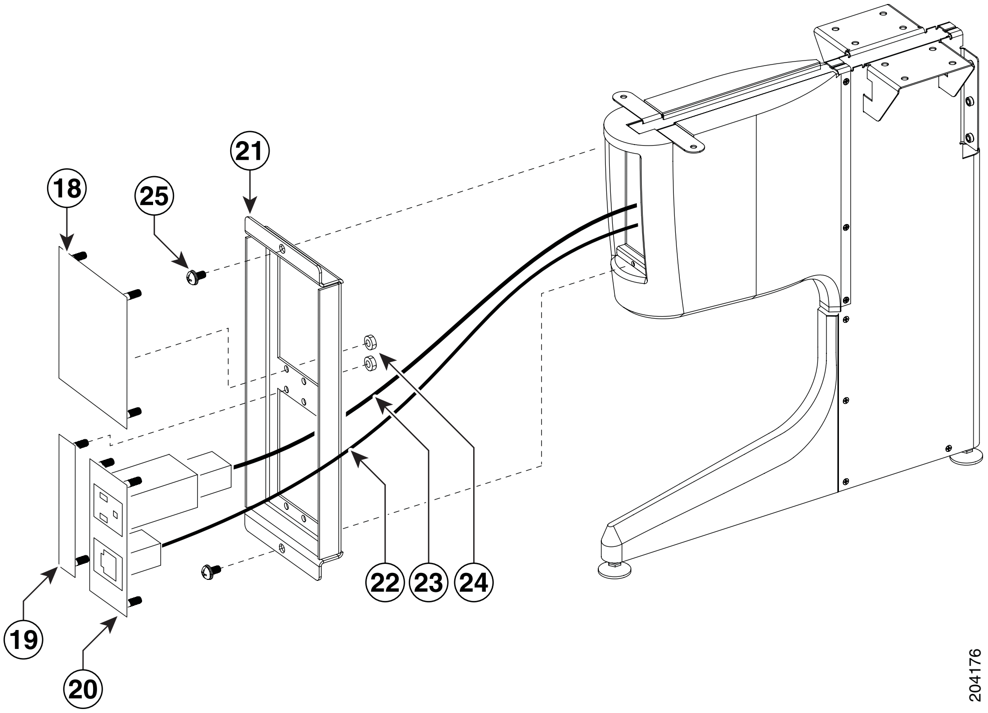
Step 3 Assemble the I/O modules for the outside left and outside right molded foam bumpers.

The outside left and outside right molded foam bumpers only have one I/O module each. The inner molded foam bumpers have two (see Figure 17).

Note Steps for routing the Ethernet and power cables are in Chapter 8, "Routing Power and Signal Cables."

Note The flange on the I/O module cover plate is wider on the bottom than on the top.

Figure 16 Foam Bumper Assembly

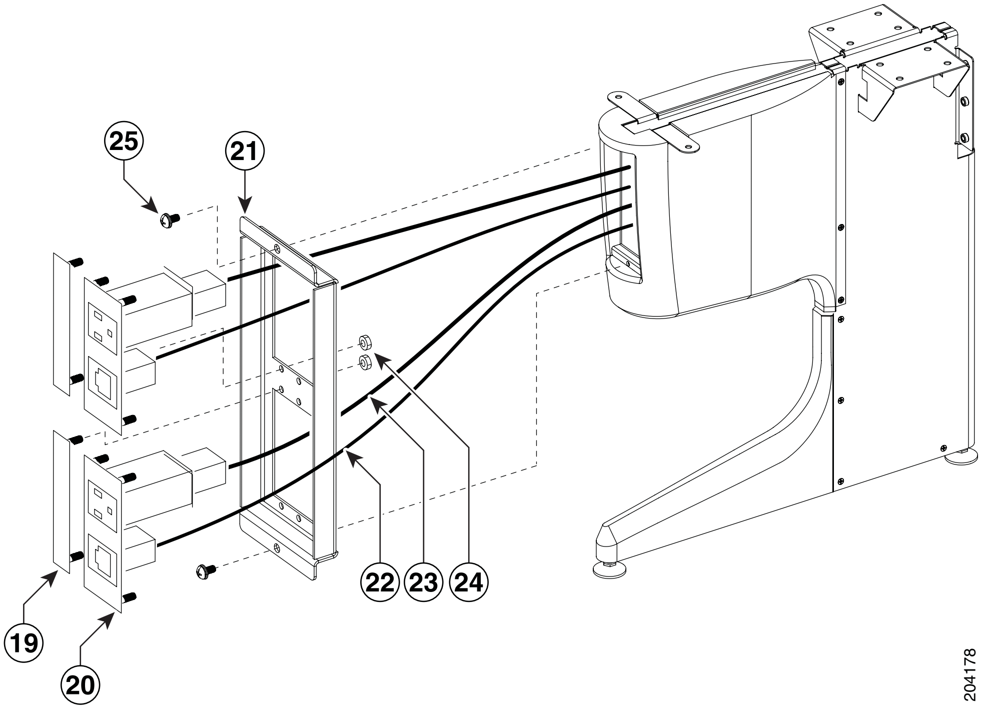


Step 4 Assemble the I/O modules for the inner molded foam bumpers.

Note Steps for routing the Ethernet and power cables are in Chapter 8, "Routing Power and Signal Cables."

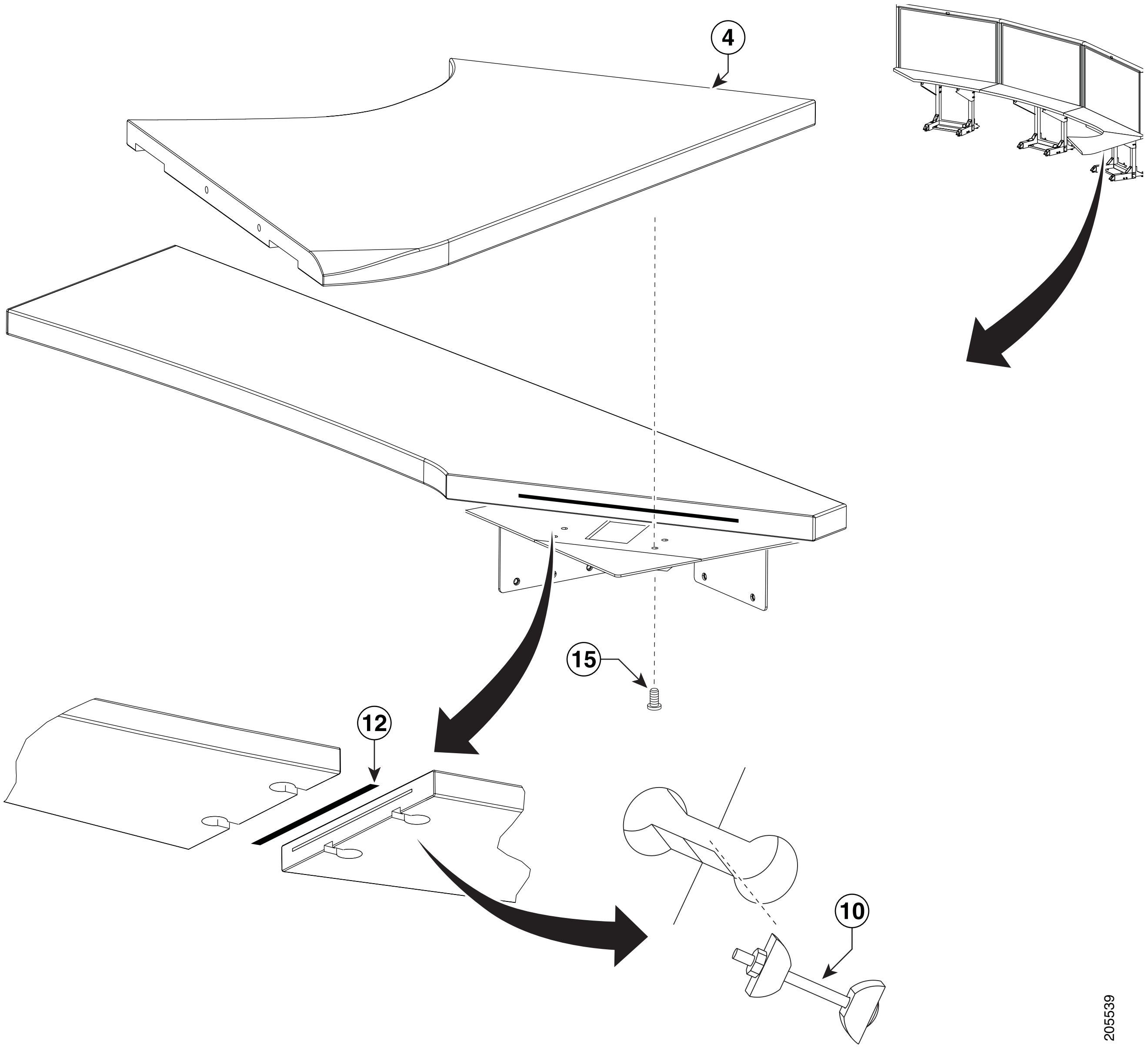
Note The flange on the I/O module cover plate is wider on the bottom than on the top.

Figure 17 *Foam Bumper Assembly*



Step 5 Attach the right wing tabletop section to the right Accessory Cabinet bracket.

Figure 18 *Right Wing Tabletop Section*

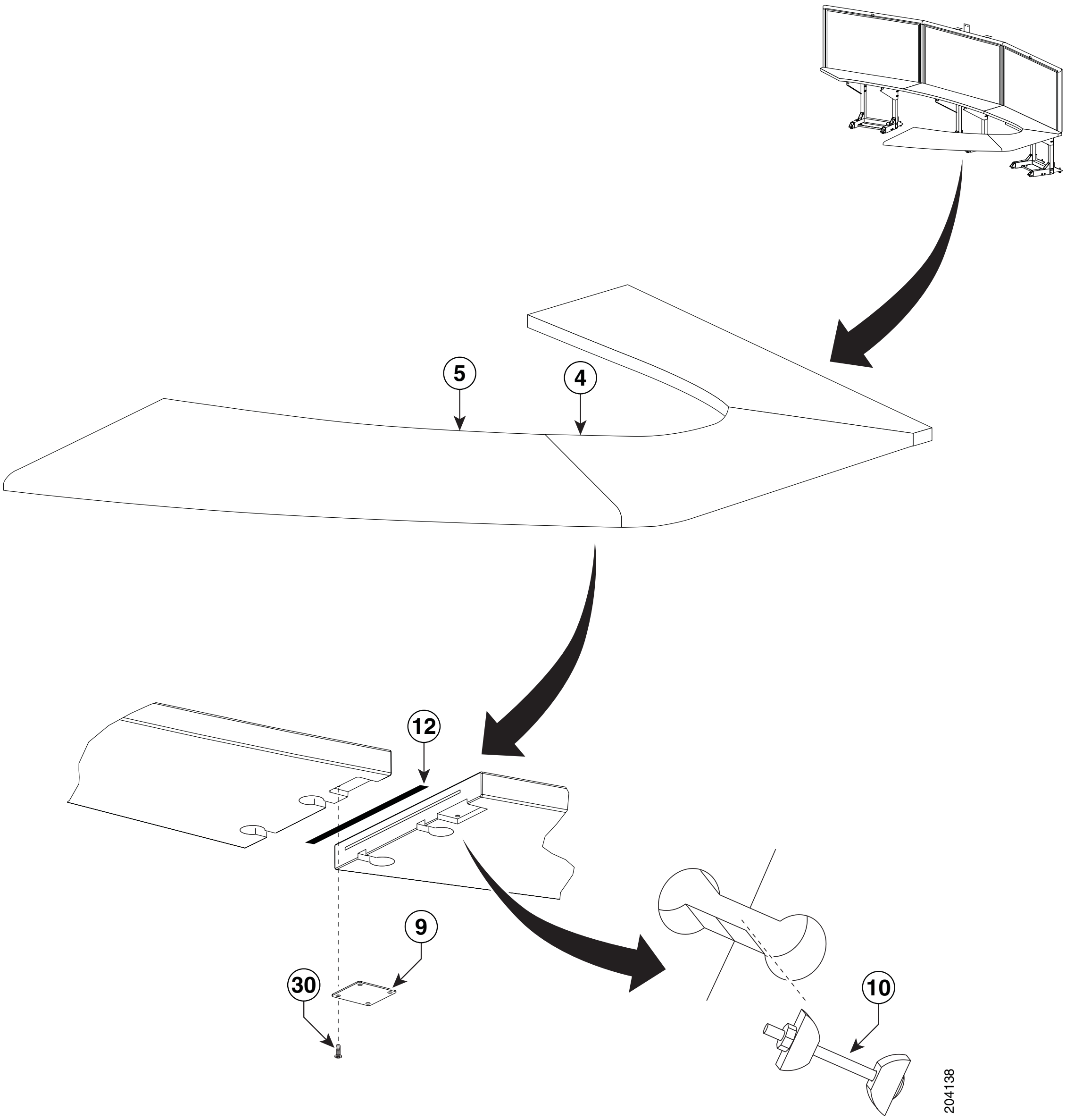


Step 6 Attach the right Table segment.

- **a.** Make sure you tighten the draw bolt evenly on both sides.
- **b.** While a draw bolt is being tightened, hold the table edges together to avoid damage to the draw bolt or the table segment.
- **c.** Tighten the draw bolt so the two table segments are connected snugly.
- **d.** While one person is tightening the draw bolt from below, it is important for the support person to maintain the alignment of the table segment edges.

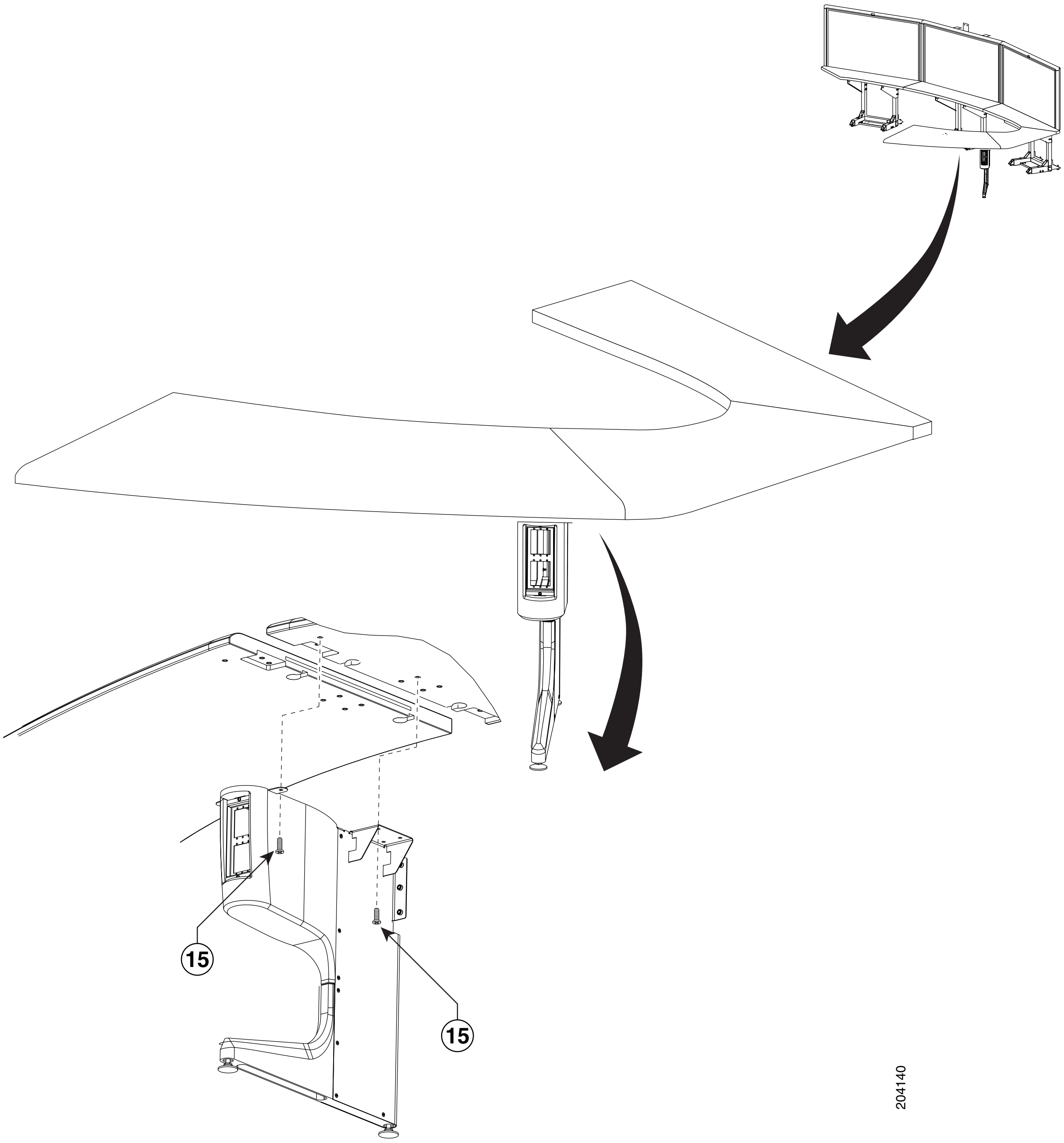
Note The splines have different lengths. Use a spline that is slightly smaller than the slot in the table top.

Figure 19 Right Table segment



Step 7 Attach the right most Table Leg.

Figure 20 Right Most Table Leg

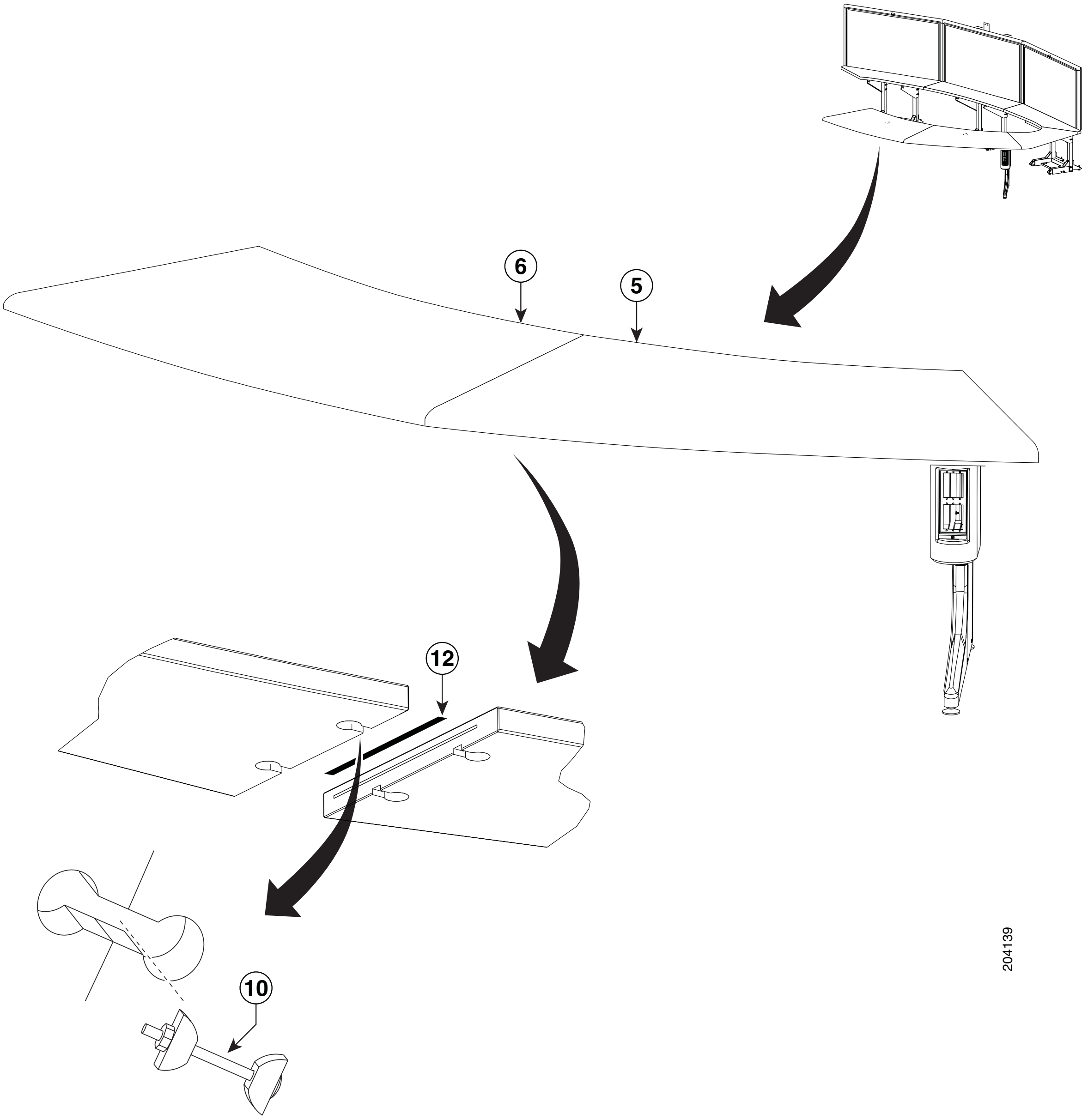


Step 8 Attach the center Table segment.

- **a.** Make sure you tighten the draw bolt evenly on both sides.
- **b.** While a draw bolt is being tightened, hold the table edges together to avoid damage to the draw bolt or the table segment.
- **c.** Tighten the draw bolts so the two table segments are connected snugly.
- **d.** While one person is tightening the draw bolt from below, it is important for the support person to maintain the alignment of the table segment edges.

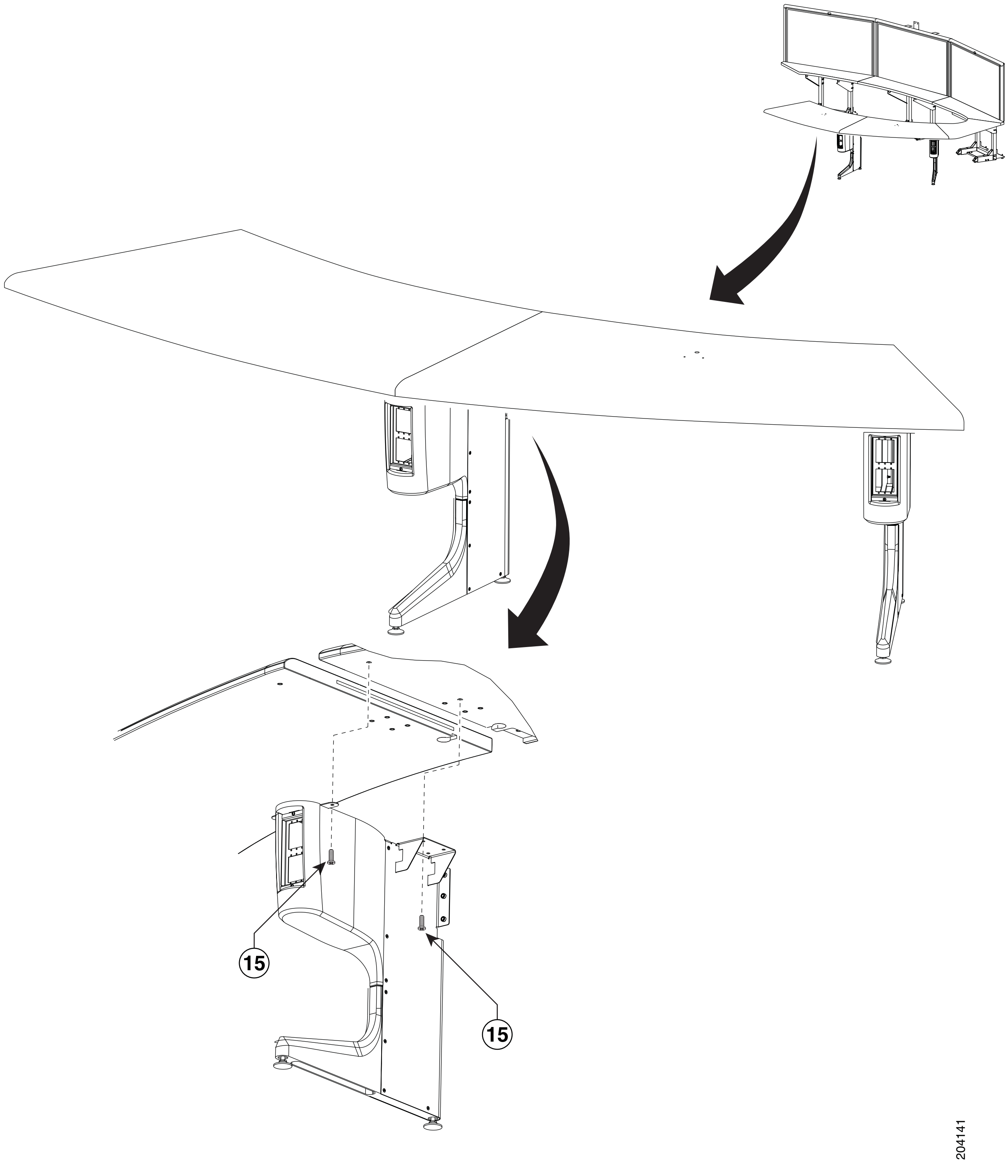
Note The splines have different lengths. Use a spline that is slightly smaller than the slot in the table top.

Figure 21 *Center Table segment*



Step 9 Attach the right center Table leg.

Figure 22 right center Table leg



Step 10 Attach the left Table segment.

a. The draw bolts have two halves that screw into a center piece.

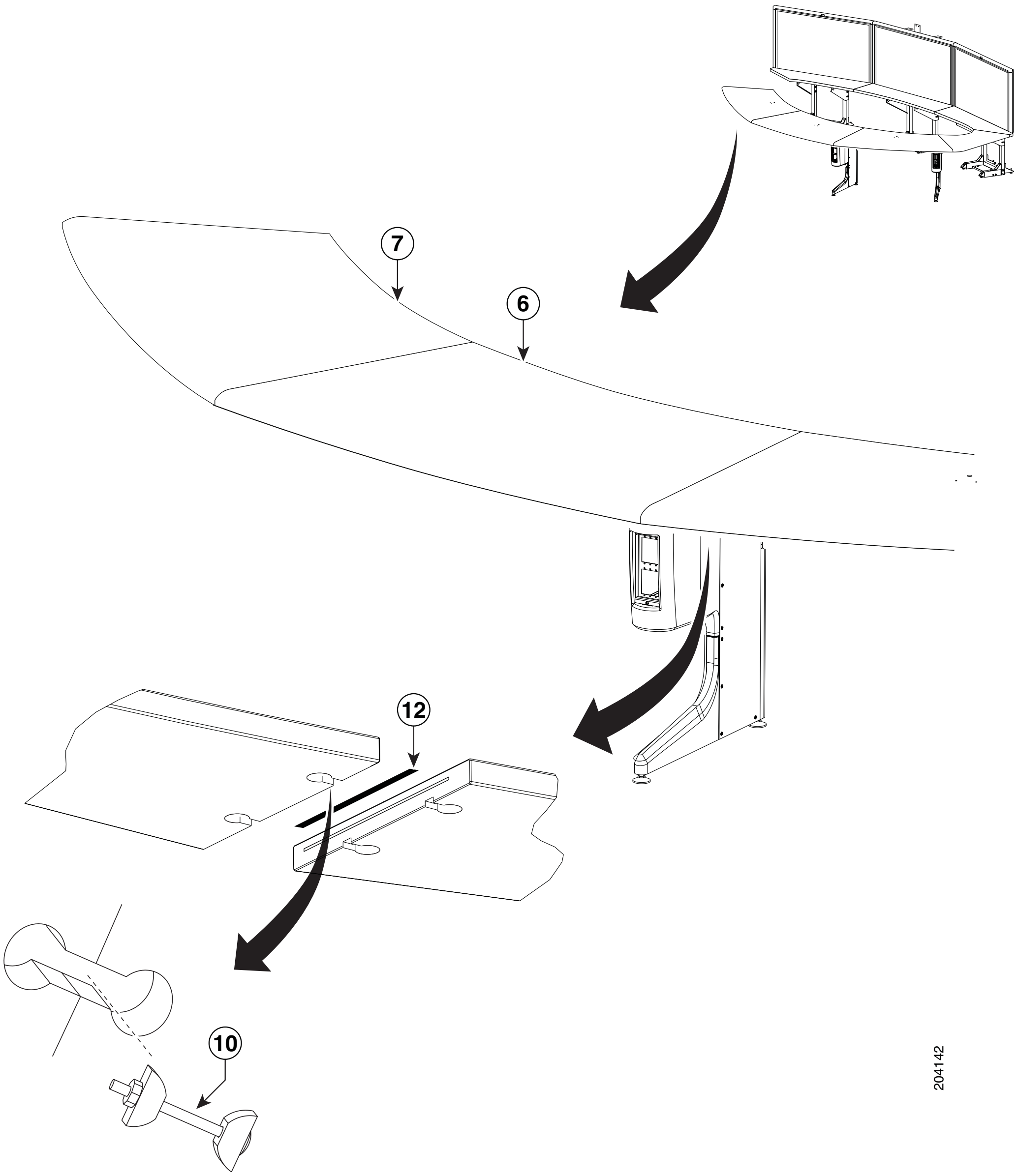
b. While a draw bolt is being tightened, hold the table edges together to avoid damage to the draw bolt or the table segment.

c. Tighten the draw bolts so the two table segments are connected snugly.

d. While one person is tightening the draw bolts from below, it is important for the support person to maintain the alignment of the table segment edges.

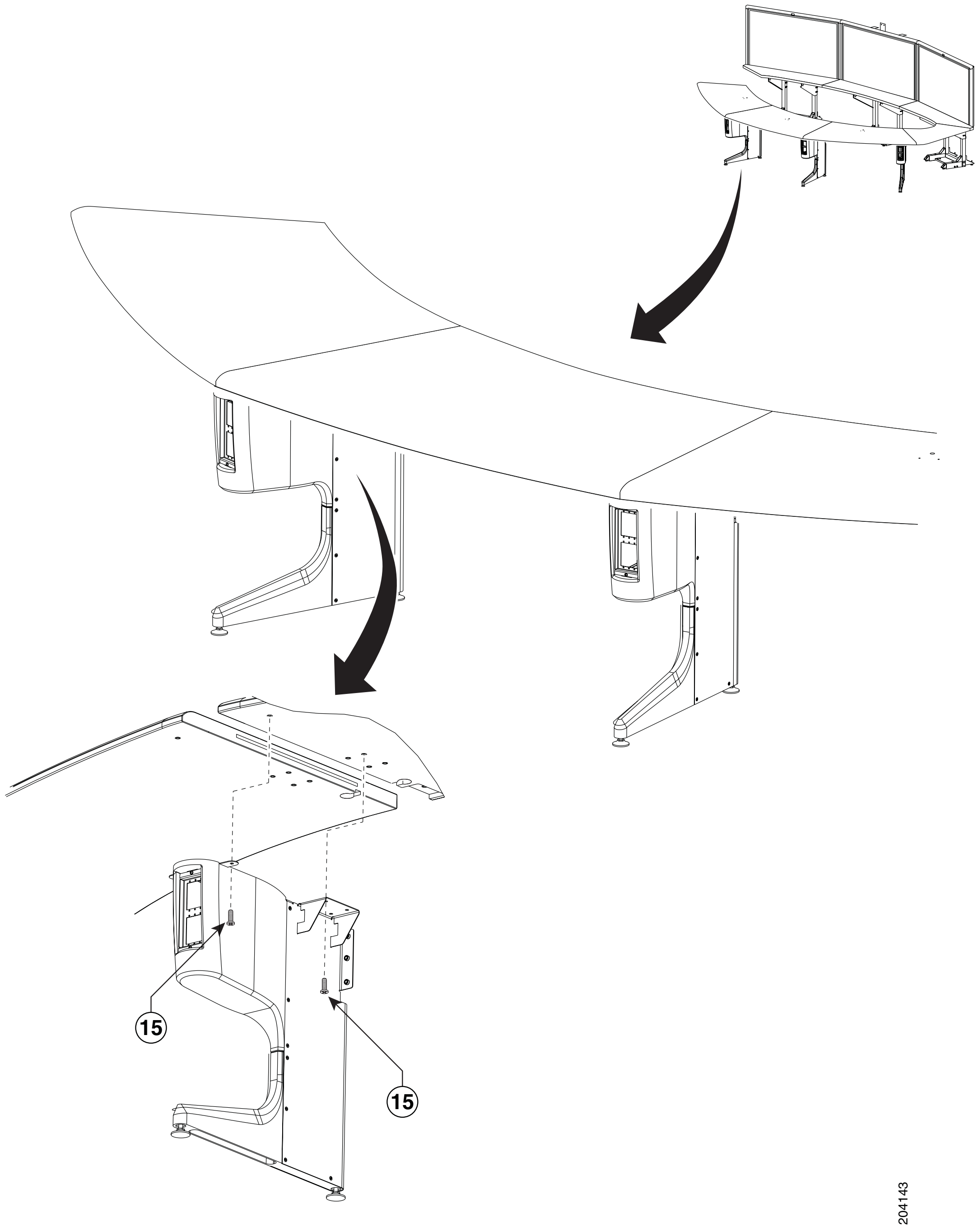
Note The splines have different lengths. Use a spline that is slightly smaller than the slot in the table top.

Figure 23 Left Table segment



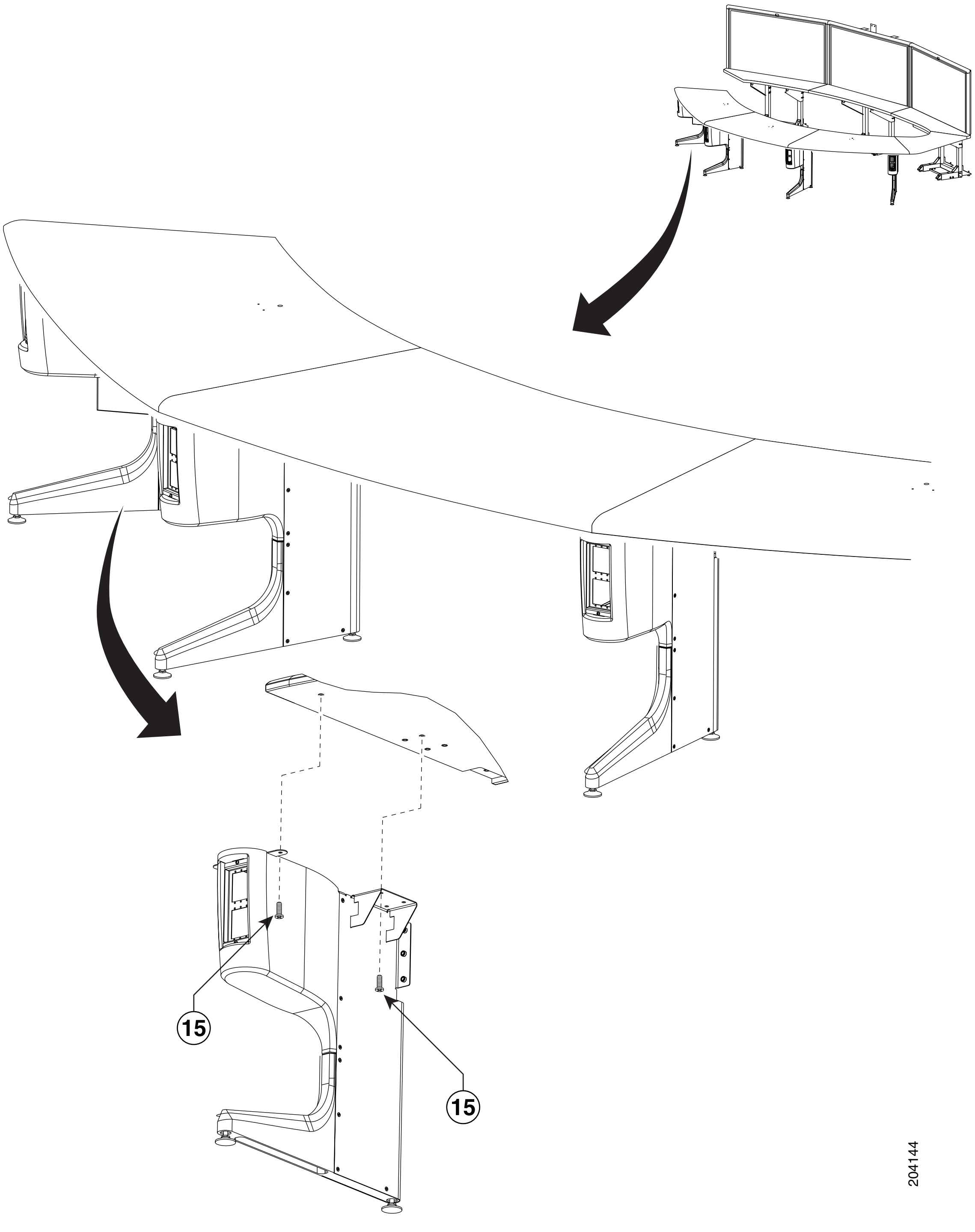
Step 11 Attach the left center Table leg.

Figure 24 Left center Table leg



Step 12 Attach the left most Table leg.

Figure 25 left Most Table Leg



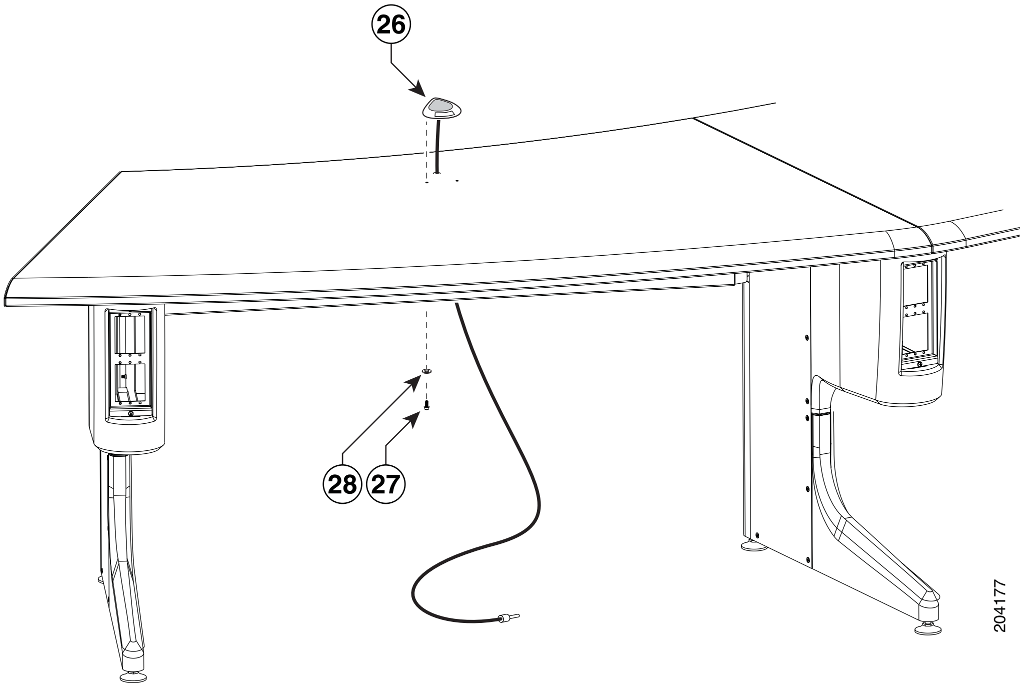
Step 13 Attach one microphone to each table segment. There are three microphones for the table.

The center microphone cable for the table must be seated in the cable channel on the underside of the center table segment in order to properly install the projector mounting bracket. You can use tape to secure it in place.

Note Steps for routing the microphone cables are in Chapter 8, "Routing Power and Signal Cables.".

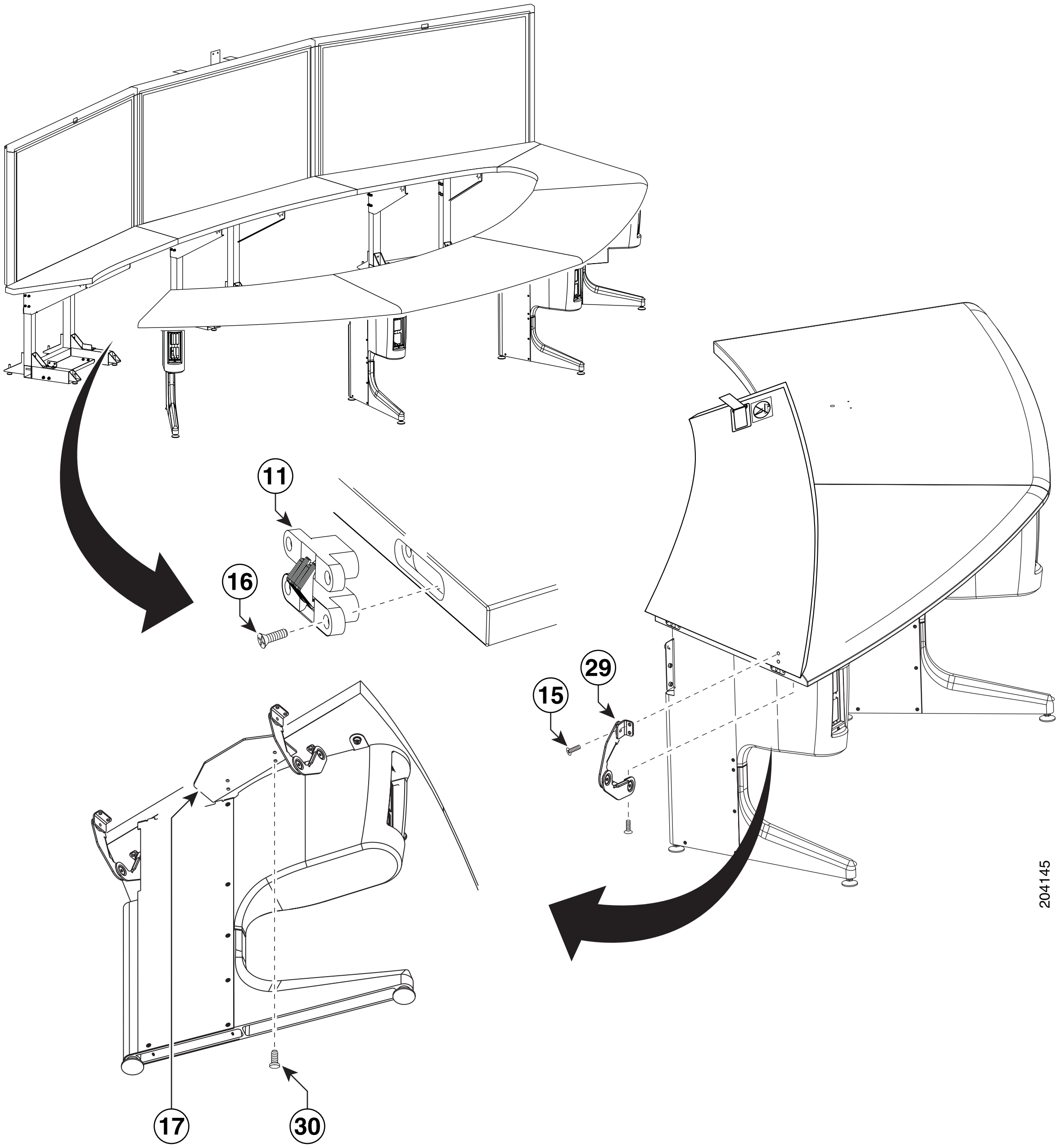
Tip Label each microphone cable where it exits from the table. You attach the microphones in Chapter 8, "Routing Power and Signal Cables." Depending on your setup, you either connect the microphones to the codec or to the codec and audio/video extension unit.

Figure 26 Microphone Assembly



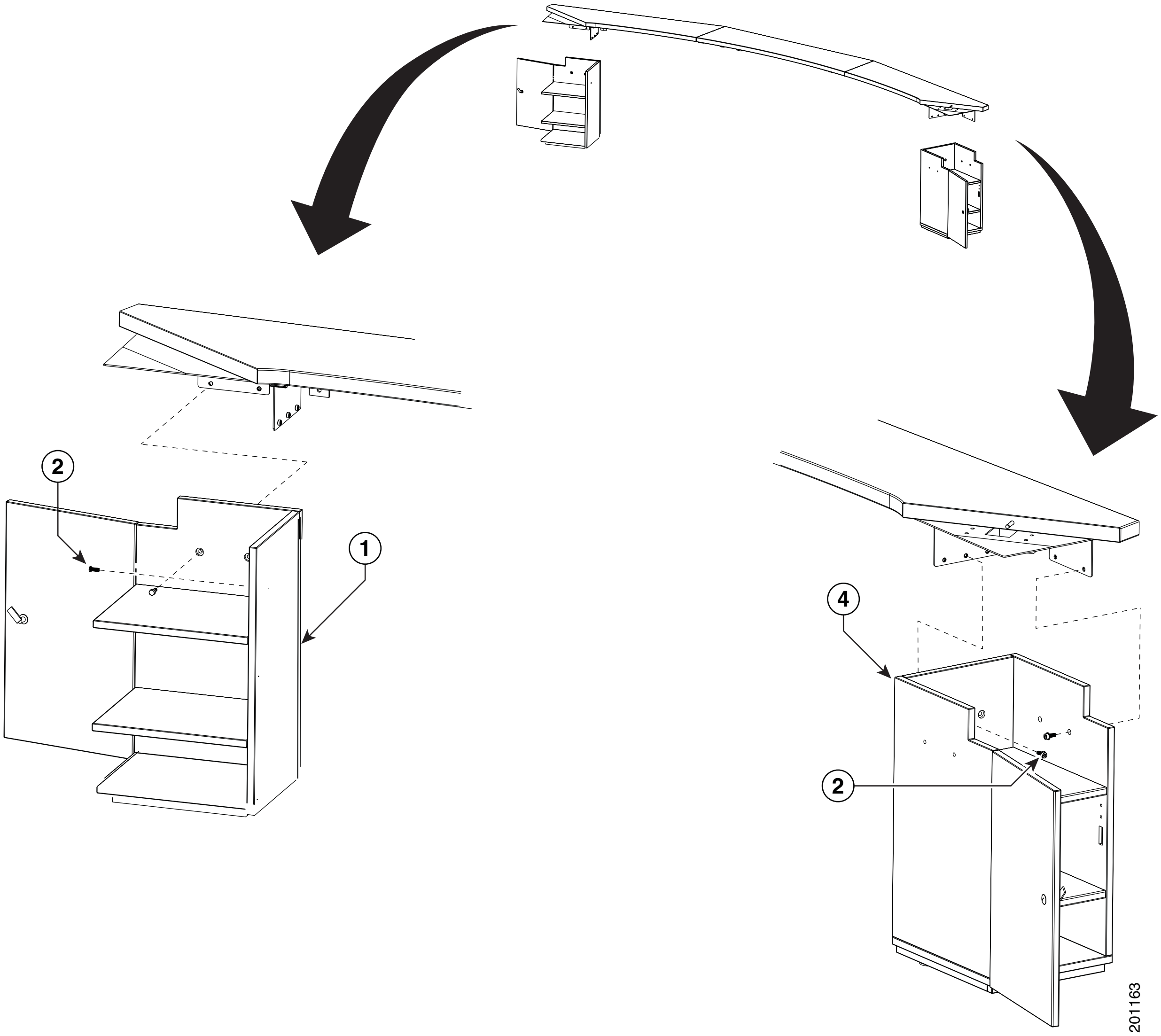
Step 14 Attach the table door to the tabletop sections and attach the "please close" label to the underside of the table door.

Figure 27 Left Connecting Tabletop Section



Step 15 Attach the Accessory cabinets to the left and right attachment brackets and cover the visible screw holes in the cabinet body with the cabinet hole cover.

Figure 28 Accessory cabinets



Note The Right Accessory Cabinet attachment bracket (marked "4" in the illustration), has a central rectangular hole that differentiates it from the Left Accessory Cabinet attachment bracket.

CHAPTER 7

Assembling the Remaining Cisco TelePresence Elements

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
Camera and Camera Assembly (Figure 7-1)					
1	Camera assembly	68-2900-06	1	2	
8	M8 x 20 mm screws	48-2273-xx	4	1	Used to attach to the Camera bracket on the center Display structure.
7	M4 x 20mm screws	48-0654-xx	4	N/A	These screws are included with the camera assembly and are used to attach the top and bottom hoods to the camera assembly.
Microphone Assembly					
1	Microphone	74-4743-xx	3	1	
2	M4 x 30 mm screws				Included in Microphone kit.
3	M4 washers				Included in Microphone kit.

Key	Part Description	Part Number	Qty	Ctn	Notes
Ethernet and Power I/O Connections					
1	I/O blank: large	700-23806-xx	2	1	
2	I/O blank: small	700-23807-xx	6	1	
3	I/O modules: power/Ethernet	74-xxxx-xx	6	1	Part number changes per country or region. Refer to Appendix B for part number.
4	I/O Module Cover plate	700-23305-xx	4	41 (CTS3K-FUR-MAPLE) 40 (CTS3K-M)	
5	10 m Cat6 Ethernet cable, blue	37-0901-xx	6	1	
6	3 m Jumper cord	37-0833-xx	9	1	
7	M4 nuts	49-0326	20	1	
8	M4 x 12 mm screws, black	48-2426-xx	10	1	
Projector Assembly					
1	Projector	74-4824-xx	1	6	
2	Projector mounting bracket	700-23824-xx	1	24 (CTS3K-FUR-MAPLE) 42 (CTS3K-M)	
3	VGA Module	69-1691-xx	1	1	
4	M8 x 20 mm screws	48-2273-xx		1	
5	M6 x 10 mm screws	48-1963-xx	4	24 (CTS3K-FUR-MAPLE) 42 (CTS3K-M)	
6	M8 washers	48-2273-xx		1	
Privacy Panel Assembly					
1	Privacy panel: center-left	700-23333-xx	1	34 (CTS3K-FUR-MAPLE) 31 (CTS3K-M)	
2	Privacy panel: center	700-23334-xx	1	34 (CTS3K-FUR-MAPLE) 31 (CTS3K-M)	
3	Privacy panel: center-right	700-23332-xx	1	34 (CTS3K-FUR-MAPLE) 31 (CTS3K-M)	
4	Privacy panel: right-wing	700-23362-xx	1	13	
5	M8 x 20 mm screws	48-2273-xx		1	
Codec Assembly					
1	Primary codec	68-2897-xx	1	3	
2	Secondary codec	68-2898-xx	2	4, 5	
3	Cable management bar	700-23449-xx	3	3, 4, 5	
4	Codec attachment brackets	700-23342-xx	6	12	

Key	Part Description	Part Number	Qty	Ctn	Notes
5	M4 x 12 mm screws	48-1045-xx	20	1	
6	M4 washers	49-0735-xx	20	1	
Audio/Video Extension Unit					
1	Mounting bracket for audio/video extension unit	700-26833-xx	1	1	For codecs with a single microphone connection
2	audio/video extension unit	800-30442-xx	1	1	For codecs with a single microphone connection
Speaker Assembly					
1	Speaker	74-4740-xx	3	7, 8, 9	
2	Speaker boards left and right	700-23602-xx (CTS3K-FUR-MAPLE) 74-5544-01 (CTS3K-M)	2	47 (CTS3K-FUR-MAPLE) 44 (CTS3K-M)	
3	Speaker board center	700-23603-xx (CTS3K-FUR-MAPLE) 69-1836-01 (CTS3K-M)	1	47 (CTS3K-FUR-MAPLE) 44 (CTS3K-M)	
4	Speaker cable	37-0849-xx	3	1	
5	Leveling foot	51-4540-xx	6	1	
6	half-turn bolt	48-2275-xx	6	1	
7	Speaker board brackets	700-23944-xx	6	12	
8	M8 x 20 mm screws	48-2273-xx		1	
9	M8 washers	49-1165-xx		1	
Cisco IP Phone 7970		68-2433-xx	1	1	The IP Phone should be placed near the right wing Table segment to prevent it from appearing on screen.
Projector Screen Assembly, Type 1		800-28681-xx	1	39 (CTS3K-FUR-MAPLE) 36 (CTS3K-M)	
Projector Screen Assembly, Type 2		CTS3K-SCREEN 74-5416-xx	1	39 (CTS3K-FUR-MAPLE) 36 (CTS3K-M)	Your system ships with either a Type 1 or Type 2 screen. Refer to the projector screen installation guide that is packaged with the assembly.
Auxiliary Control Unit					
1	Auxiliary Control Unit	CTS-LIGHT-CTRL 74-5405-xx	1	19	

Key	Part Description	Part Number	Qty	Ctn	Notes
Camera Target Assembly					
1	Tabletop camera target: large	700-24323-xx	1	32 (CTS3K-FUR-MAPLE) 29 (CTS3K-M)	
2	Tabletop camera target: small	700-24320-xx	1	32 (CTS3K-FUR-MAPLE) 29 (CTS3K-M)	
3	Cardboard ruler	700-24321-xx	1	32 (CTS3K-FUR-MAPLE) 29 (CTS3K-M)	
4	Vertical bar	700-23961-xx	2	32 (CTS3K-FUR-MAPLE) 29 (CTS3K-M)	
5	Horizontal bar	700-23960-xx	2	32 (CTS3K-FUR-MAPLE) 29 (CTS3K-M)	
6	M4 x 20 mm screws	48-0654-xx	4	1	
Switch Bracket					
Note	There are two additional brackets included with the accessory cabinet in Carton 33: 700-23338-xx and 700-23344-xx. These brackets attach the optional Ethernet switch to the left accessory cabinet. If you ordered this switch, refer to the *Cisco TelePresence System Hardware Options & Upgrade Guide* to install the switch.				

Note Note that the key numbers restart for each element.

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

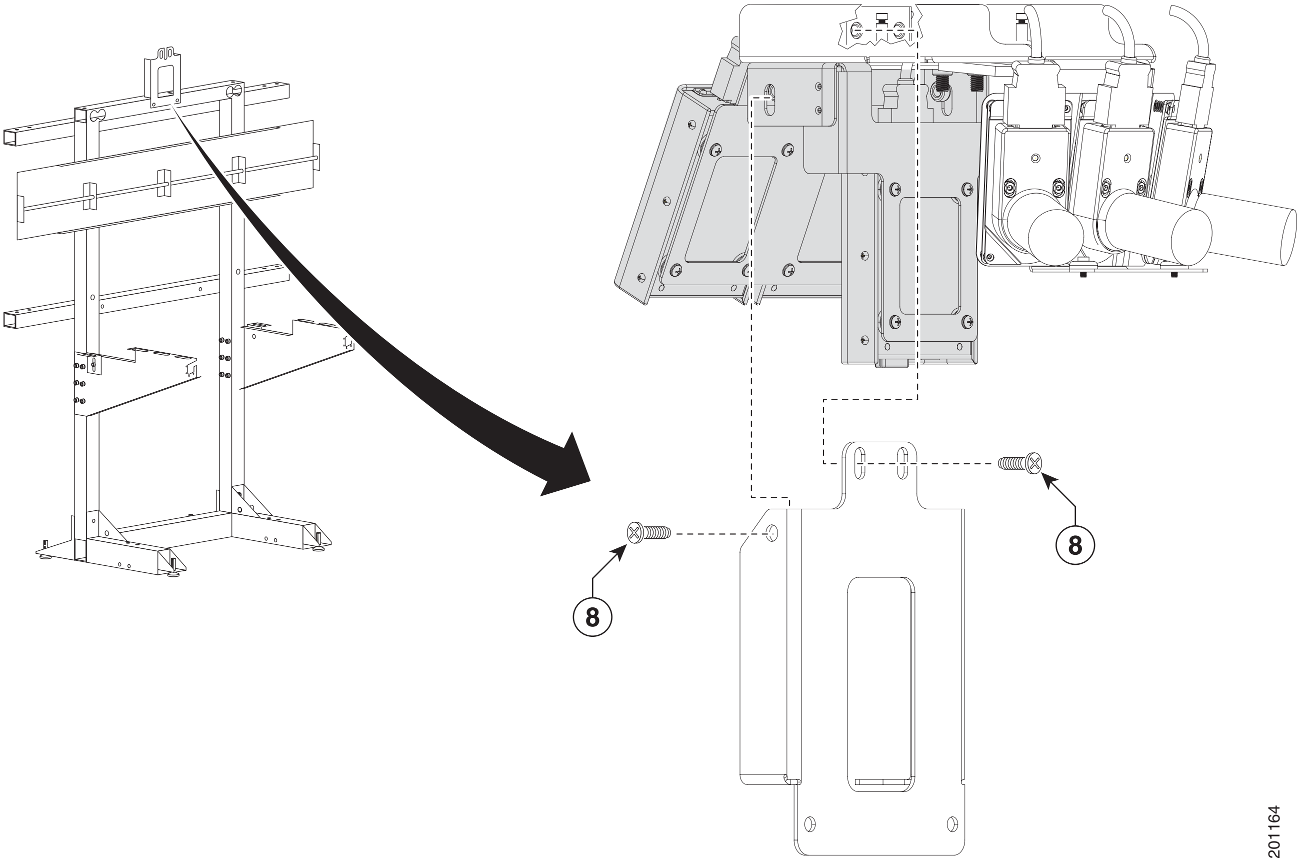
Note The directions *left* and *right* refer to the assembly as you face it from the front.

Step 1 Place the assembly over the center display, then attach the Camera Assembly to the Camera Assembly bracket.

For clarity, the display has been removed from the illustration in Figure 7-1.

Note There are two foam pads on inside of the camera assembly. Make sure that the foam pad on the top of the camera assembly touches the top of the display, and the foam pad on the front of the assembly touches the front of the display. To make adjustments, loosen the four screws on the top of the camera assembly and move the assembly forward or back as required; then, retighten the four screws.

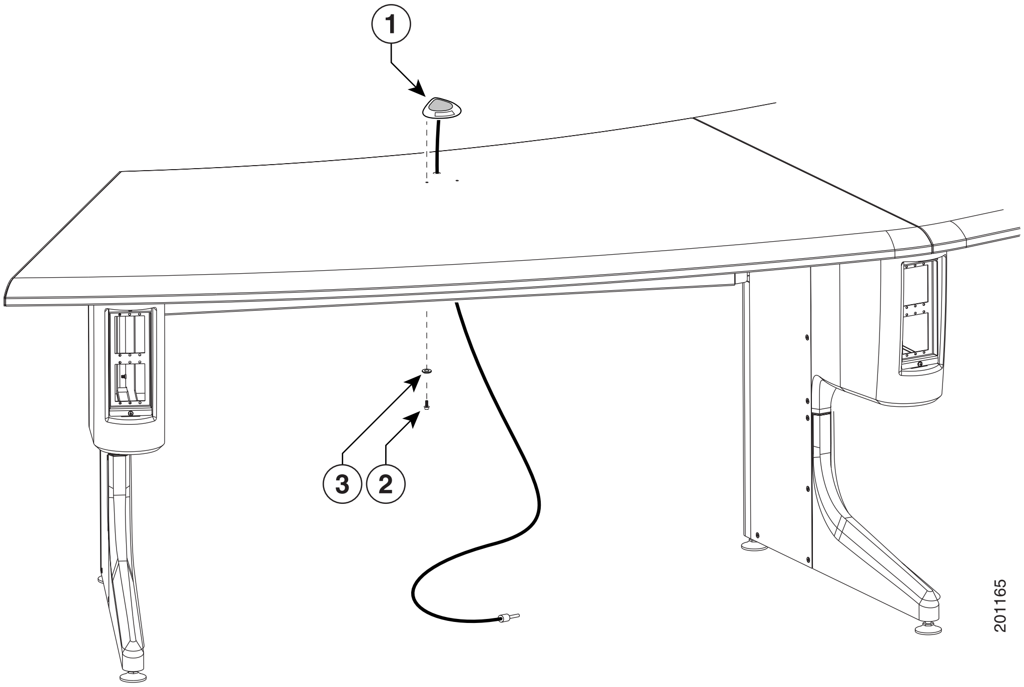
Figure 7-1 Camera Assembly



Step 2 Attach the Microphones to the left, right, and center Table segments.

The center Microphone cable must be seated in the cable channel on the underside of the center Table segment in order to properly install the Projector mounting bracket. You can use tape to secure it in place.

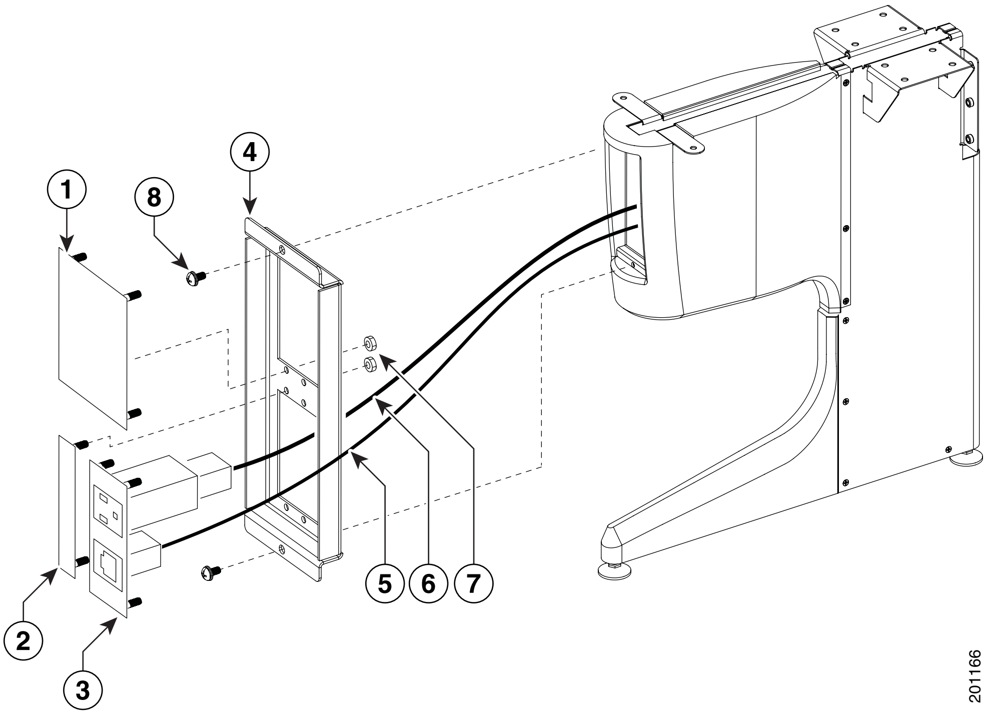
Figure 7-2 Microphone Assembly



Step 3 Assemble the I/O Modules for the outside left and outside right Molded Foam bumpers.

The outside left and outside right Molded Foam bumpers only have one I/O Module each. The inner Molded Foam bumpers have two (see Figure 7-4).

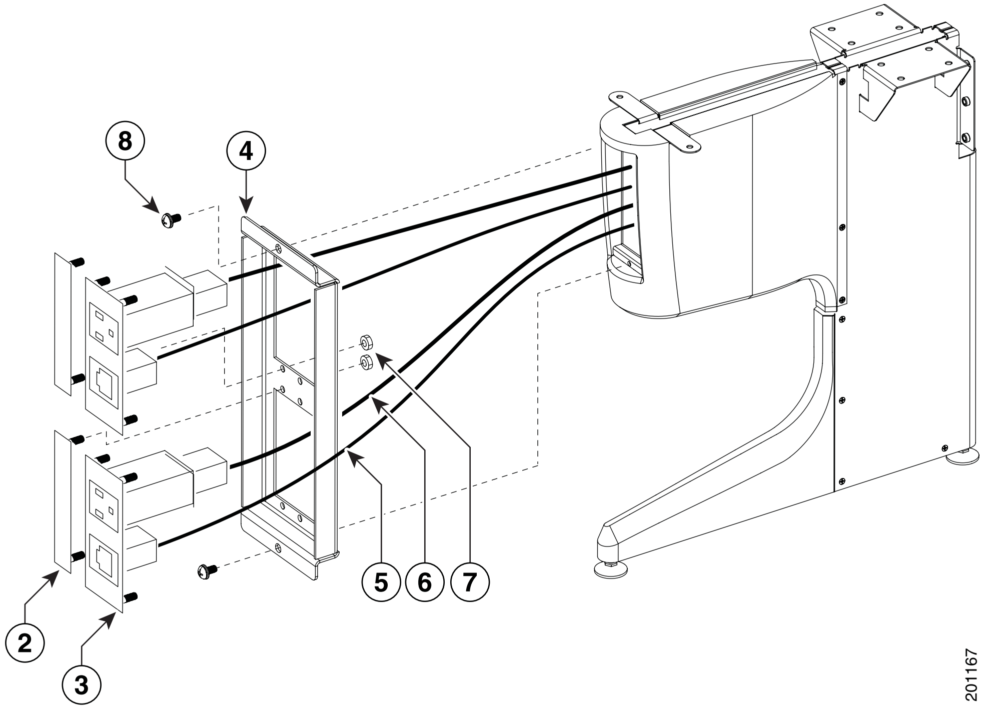
Figure 7-3 I/O Modules for Outer Foam Bumpers



Step 4 Assemble the I/O Modules for the two inner Molded Foam bumpers.

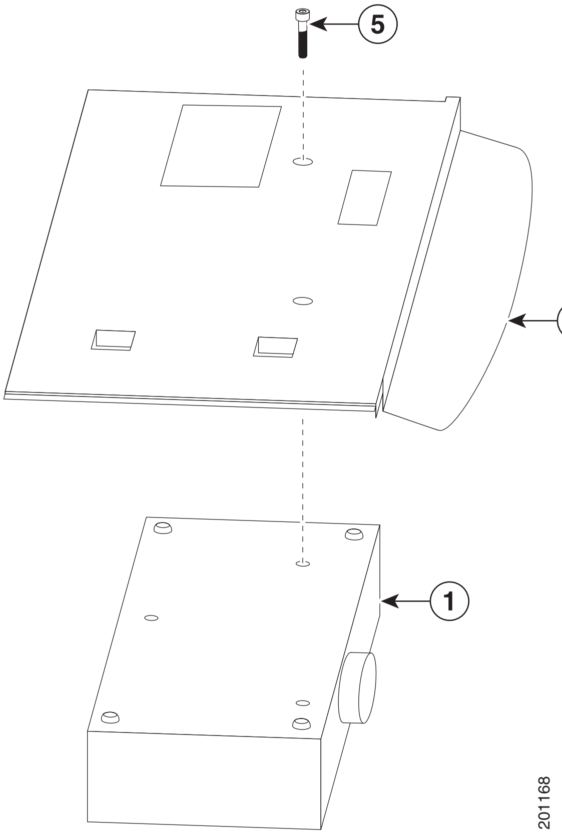
The outside left and outside right Molded Foam bumpers only have one I/O Module each (see Figure 7-3). The inner Molded Foam bumpers have two.

Figure 7-4 I/O Modules Inner Foam Bumpers



Step 5 Attach the Projector to the Projector mounting bracket.

Figure 7-5 Projector Assembly

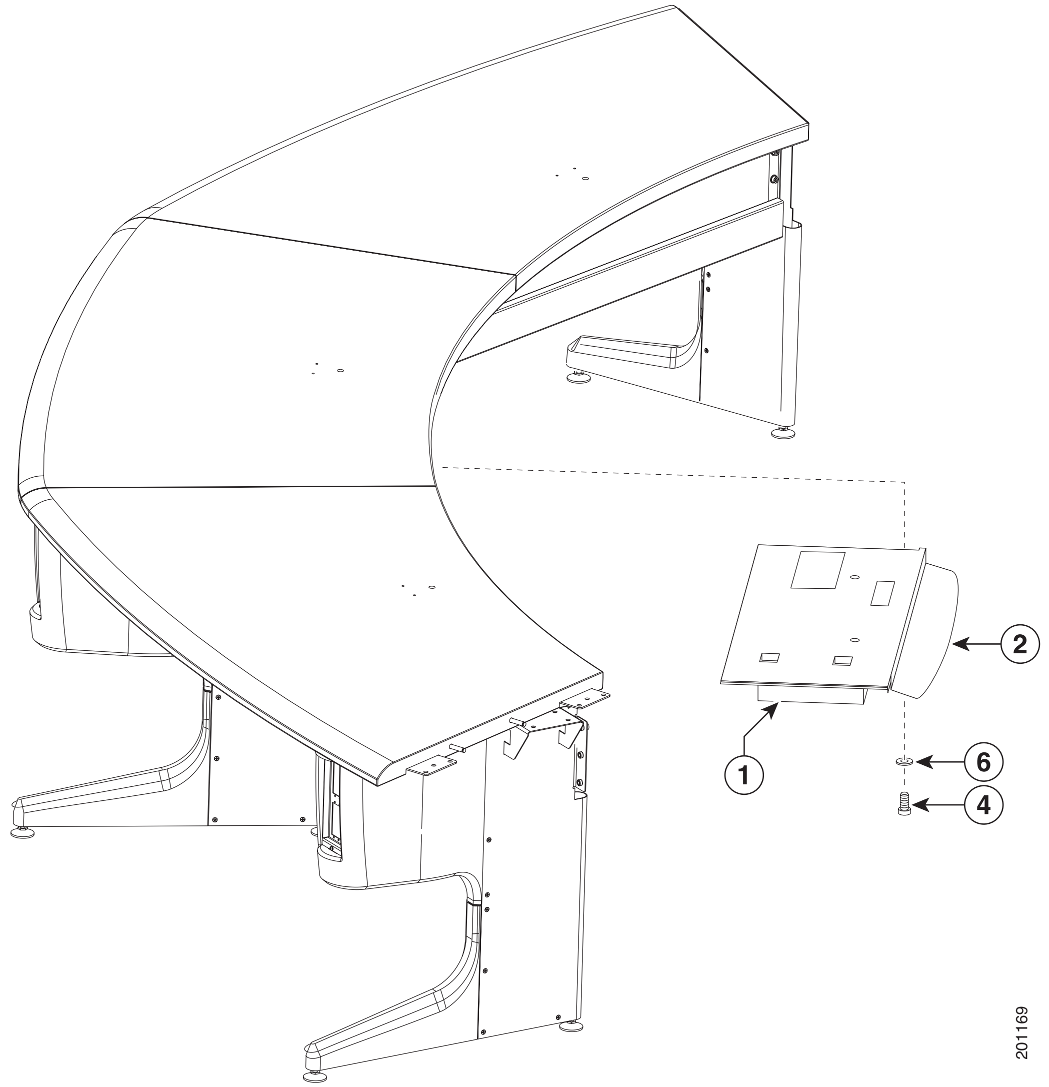


Step 6 Attach the Projector mounting bracket to the underside of the center Table segment.

a. Insert the screws and washers in the underside of the center Table segment to prepare for attaching the Projector mounting bracket; then, slide the bracket between the two rows of screws.

b. Make sure the center Microphone cable is routed securely within the cable channel on the underside of the center Table segment before attaching the Projector mounting bracket.

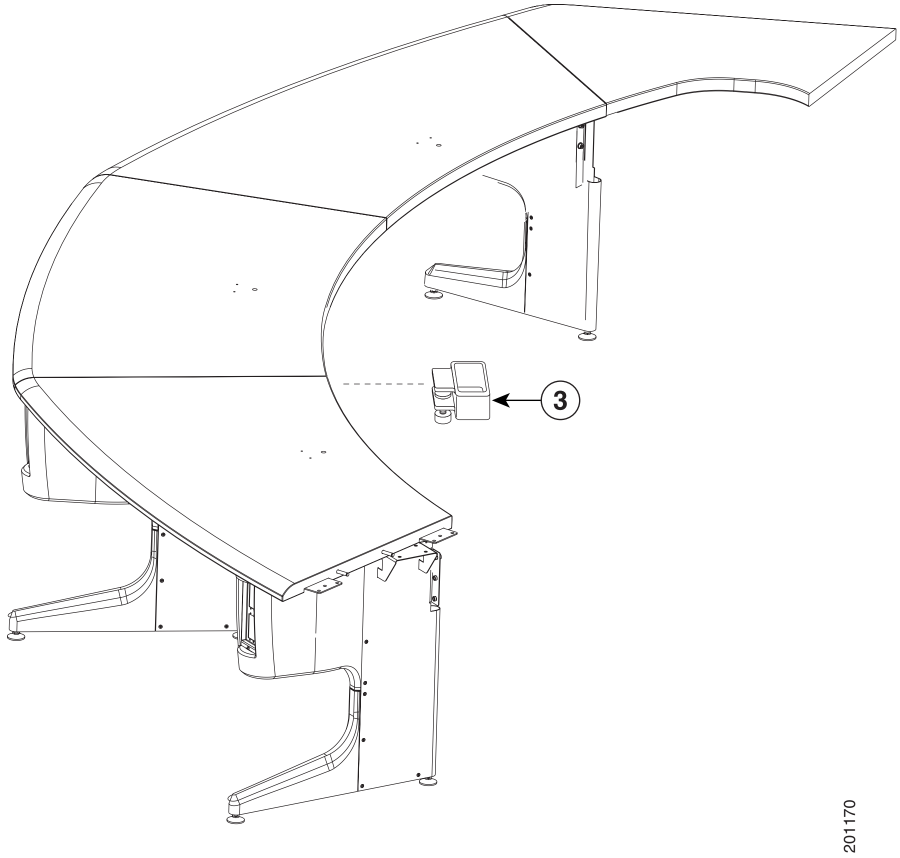
Figure 7-6 Projector Assembly



Step 7 Attach the VGA module to the center Table segment.

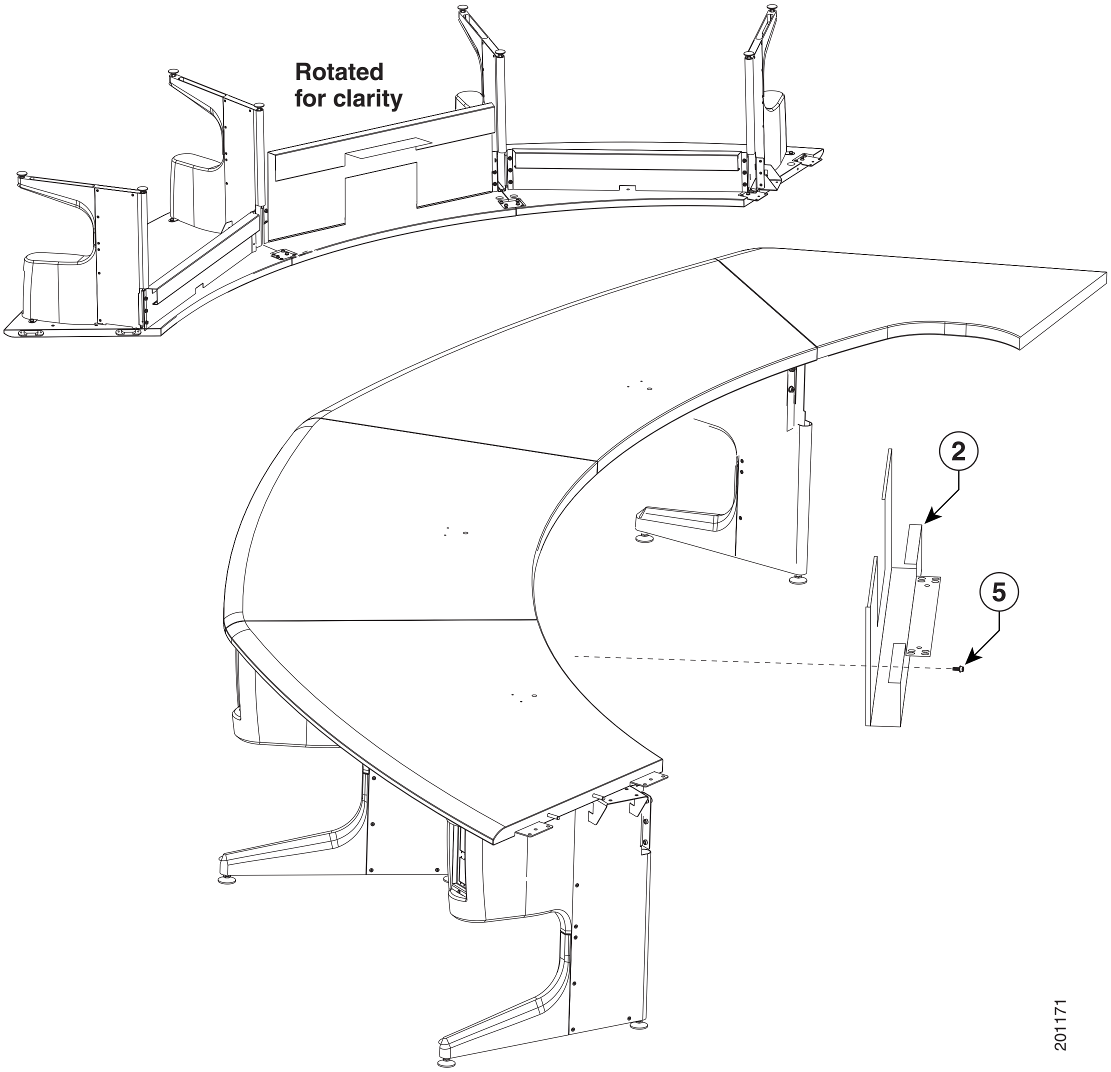
The VGA module supports the VGA peripheral cable when not in use.

Figure 7-7 VGA Module



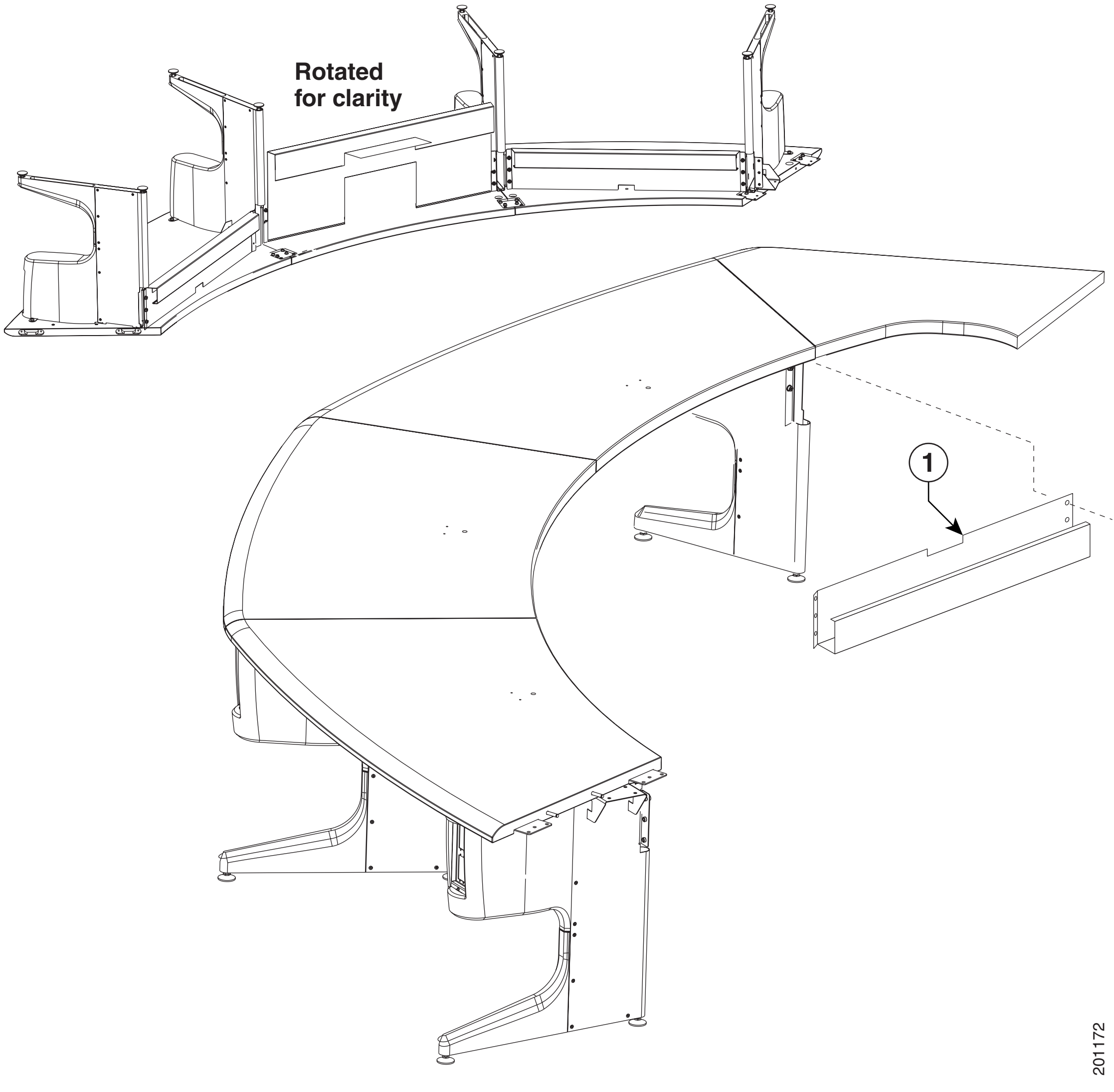
Step 8 Attach the center Privacy panel.

Figure 7-8 Privacy Panel Assembly


Rotated
for clarity
2
5
201171

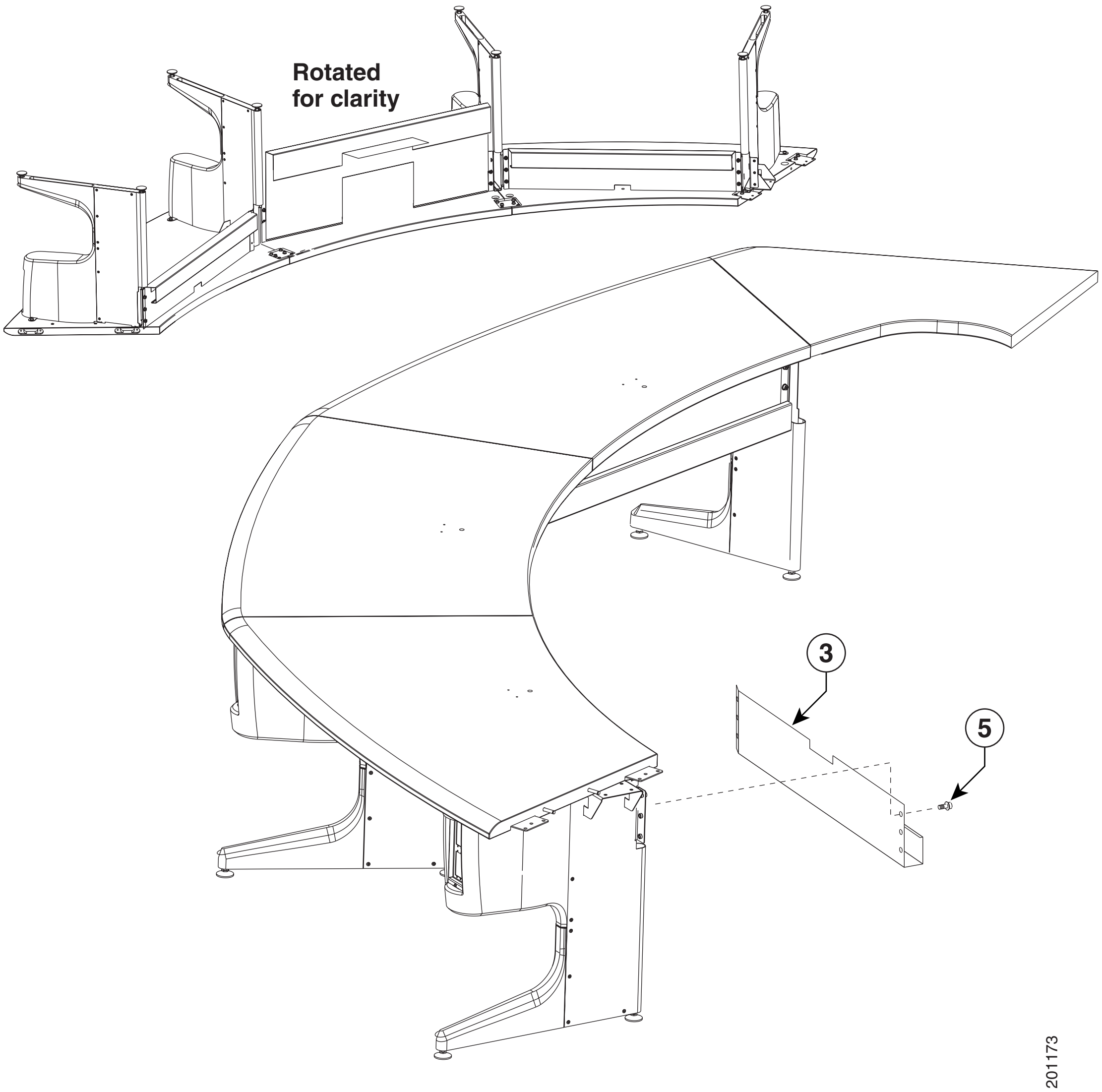
Step 9 Attach the left Privacy panel.

Figure 7-9 Privacy Panel Assembly


Rotated for clarity
1
5
201172

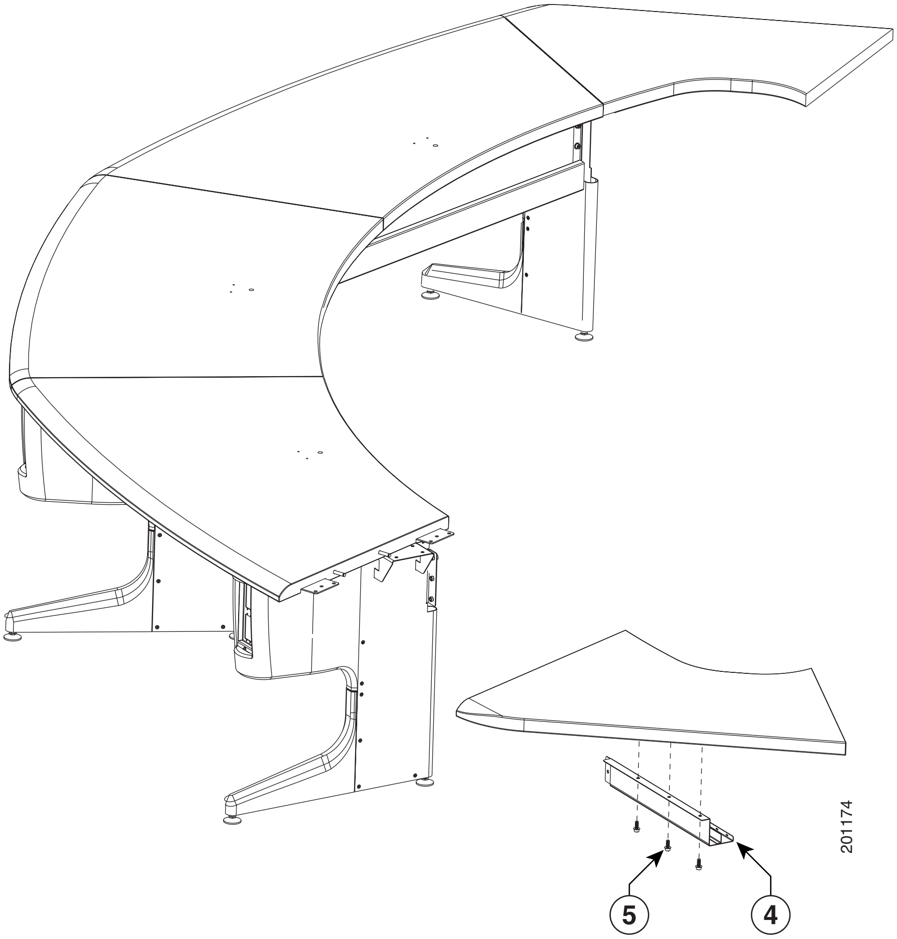
Step 10 Attach the right Privacy panel.

Figure 7-10 *Privacy Panel Assembly*


Rotated
for clarity
3
5
201173

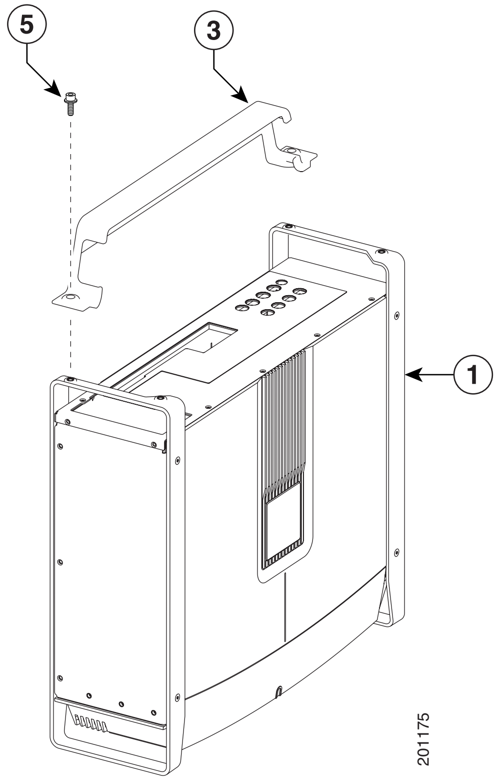
Step 11 Attach the right-wing Privacy panel.

Figure 7-11 ***Privacy Panel Assembly***



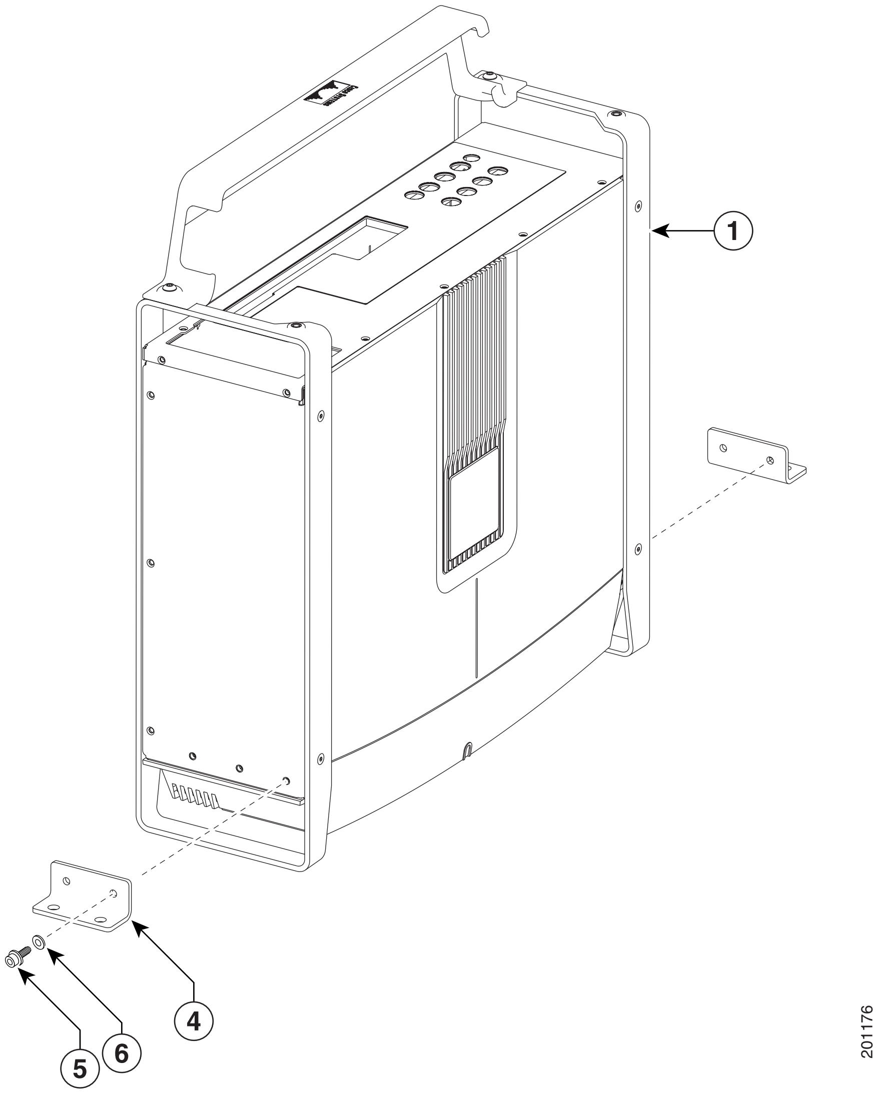
Step 12 Attach the Cable management bars to the three Codecs.

Figure 7-12 Codec Assembly



Step 13 Attach the Codec attachment brackets to the three Codecs.

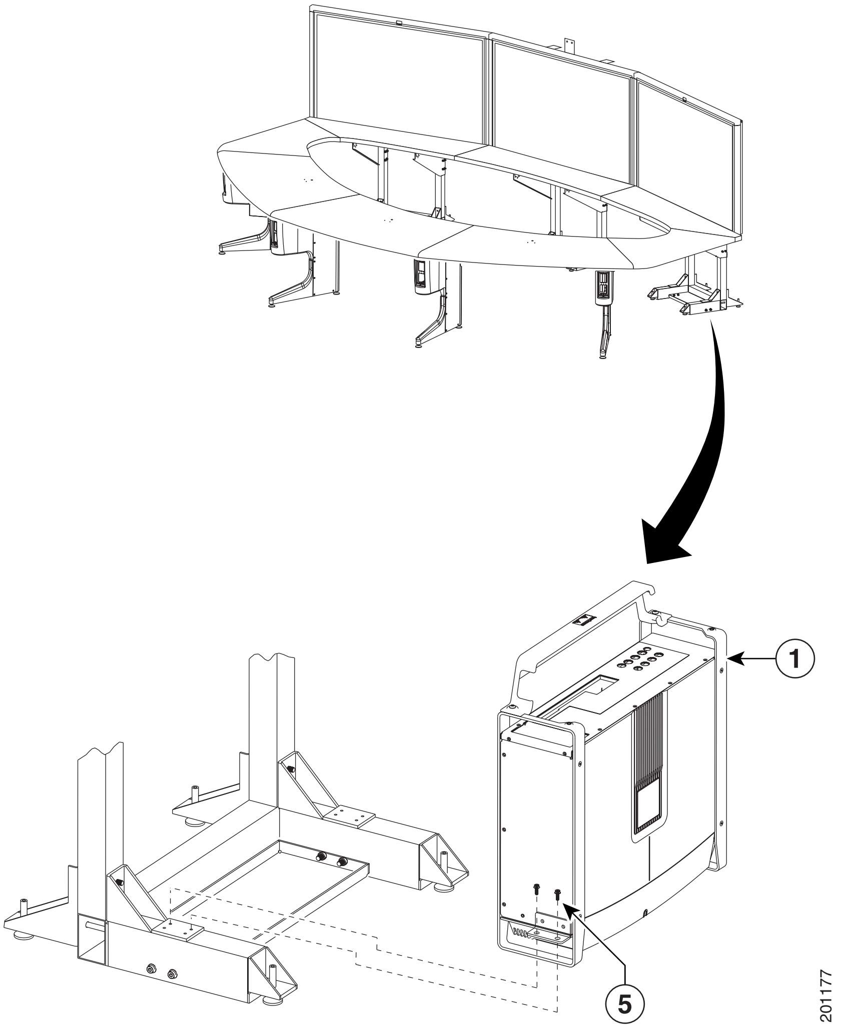
Figure 7-13 *Codec Assembly*



Step 14 Attach the three Codecs to the Display structure Front foot stabilizers.

Note If you ordered a Presentation Codec with your TelePresence system, refer to the *Cisco TelePresence Hardware Options and Upgrade Guide* for instructions to install your presentation codec.

Figure 7-14 Codec Assembly

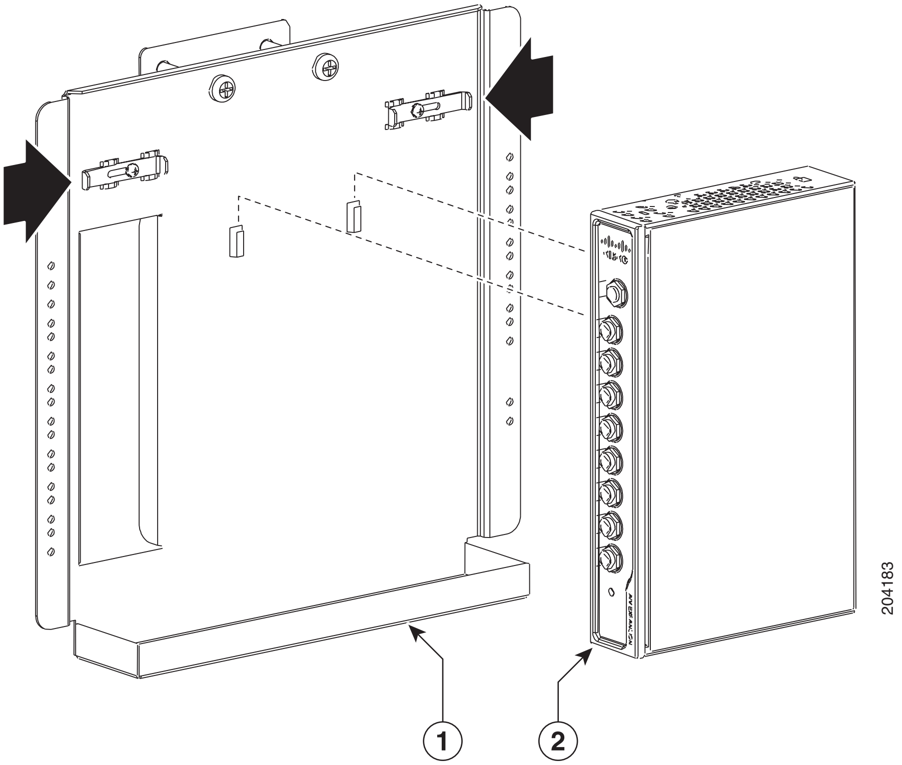


Step 15 Make a note of the microphone connections on the front of the codec and perform one of the following actions:

- If your codec has one microphone connection, complete the following steps to install the audio/video expansion unit. See Figure 8-8 for an example of this type of codec.
- If your codec has three microphone connections, continue to Step 16. See Figure 8-7 for an example of this type of codec. You do not need to install the audio/video expansion unit.

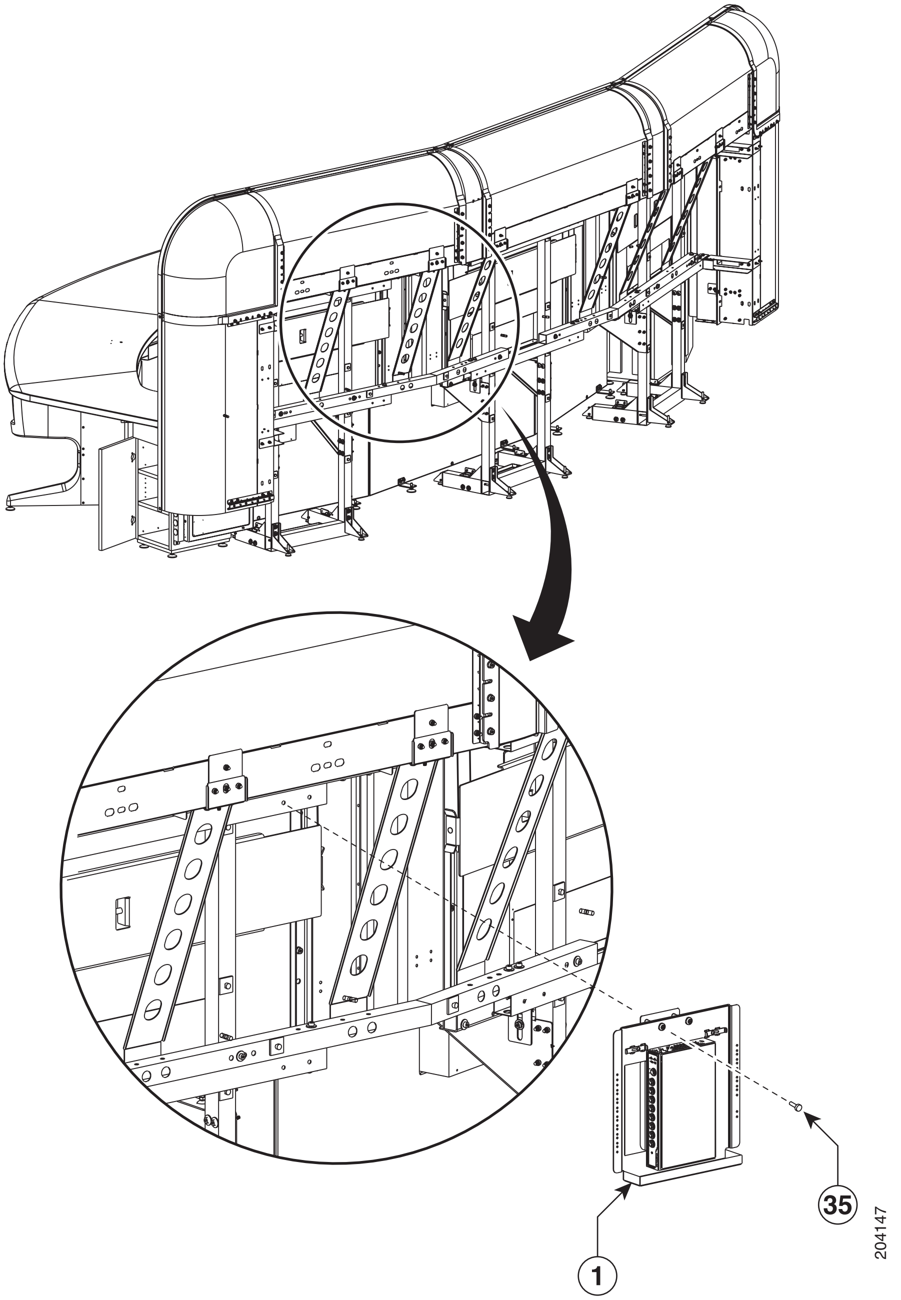
a. Attach the audio/video extension unit to its bracket.

Figure 7-15 Audio/Video Expansion Unit and Bracket



b. Attach the audio/video extension unit to the rear of the display assembly.

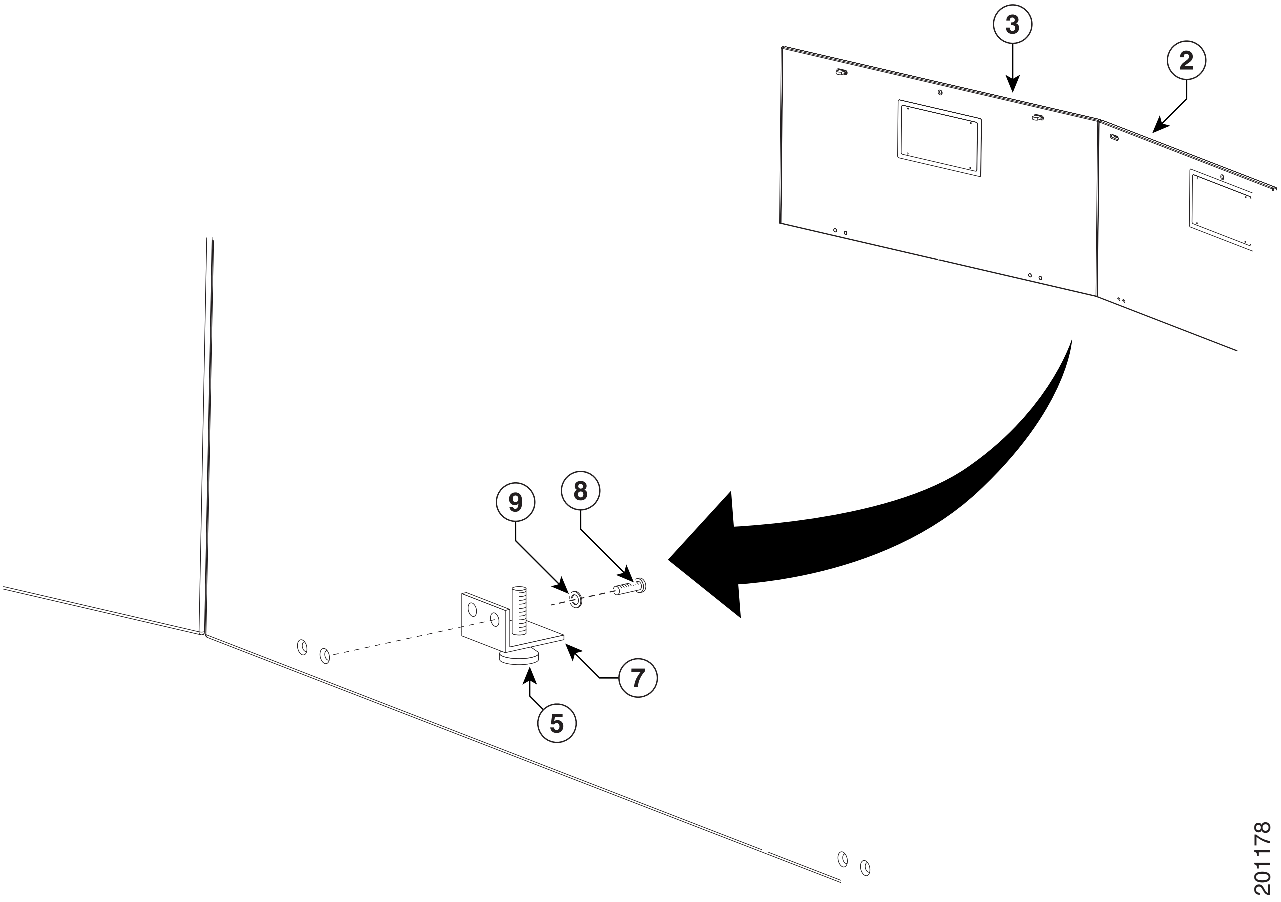
Figure 7-16 Audio/Video Extension Unit



Step 16 Attach the Speaker board brackets and Leveling feet to the Speaker boards.

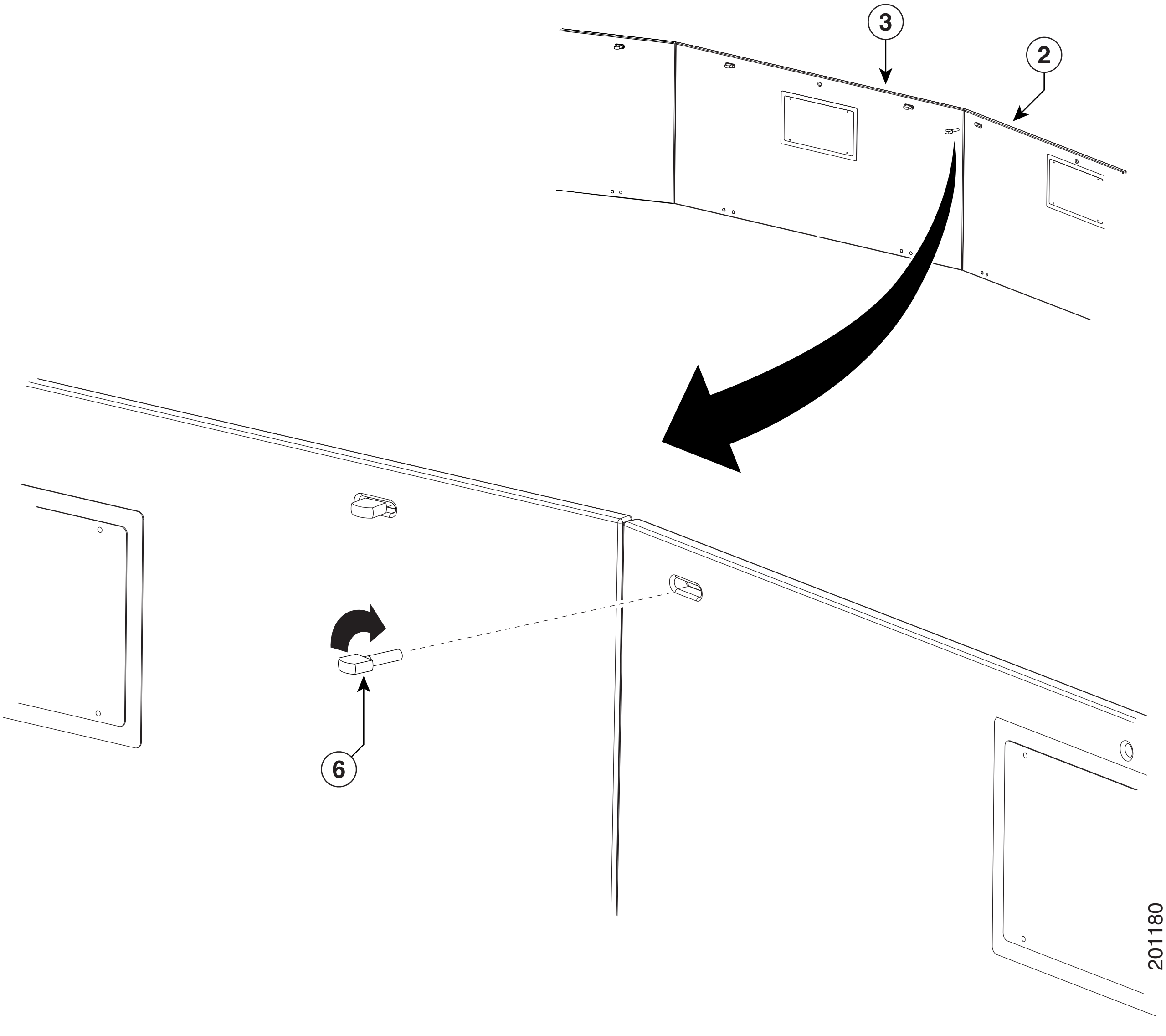
The Speaker board brackets should angle towards the rear of the Display structure.

Figure 7-17 Speaker Assembly



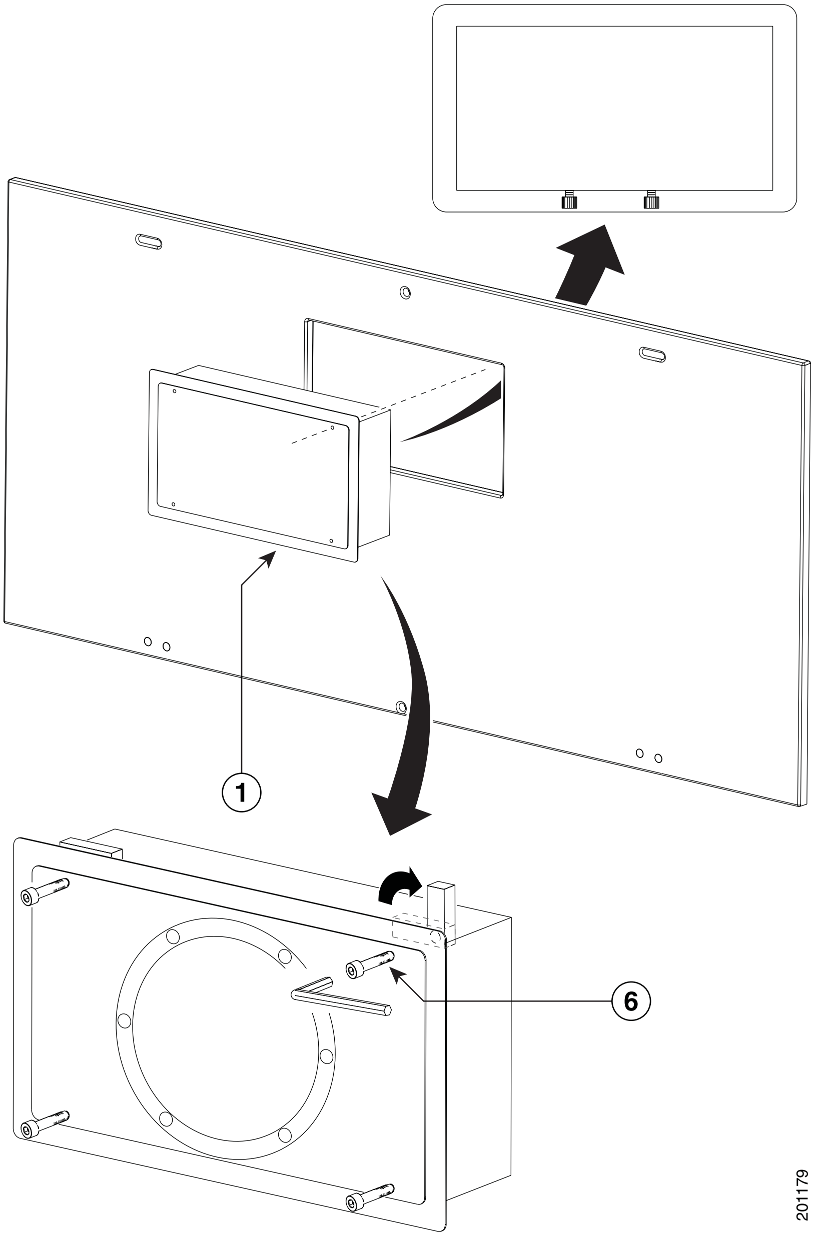
Step 17 Attach the Speaker boards to the Speaker board brackets on the underside of the Display shelves.

Figure 7-18 Speaker Assembly



Step 18 Attach the Speakers to the Speaker boards.

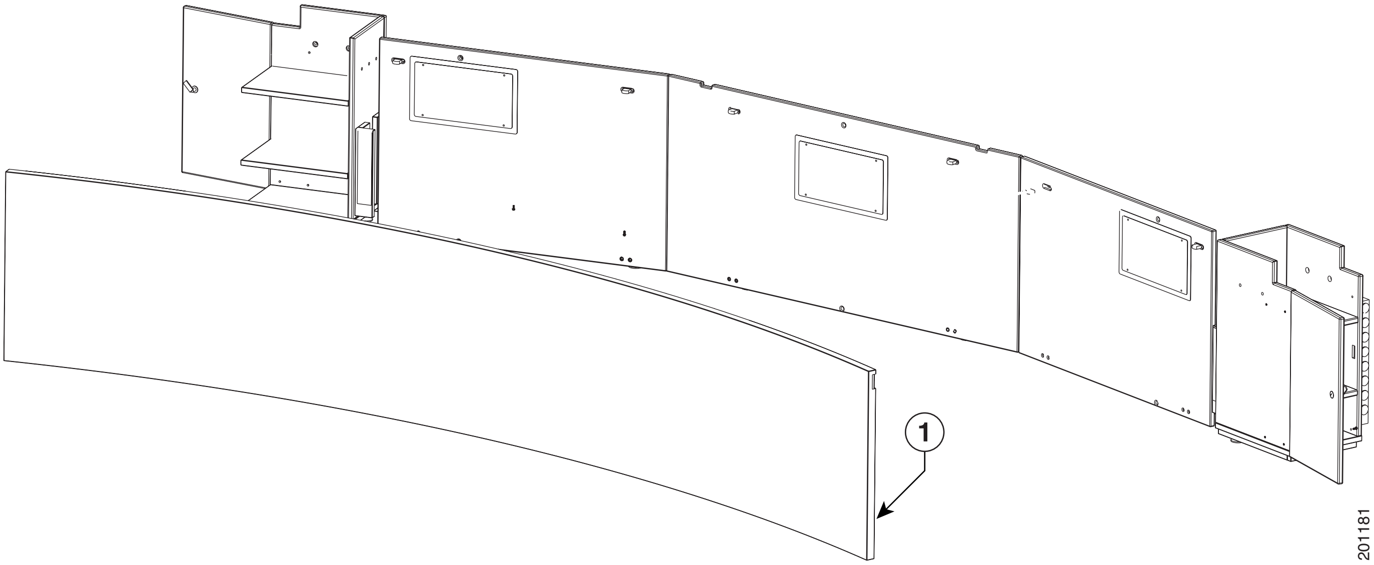
Figure 7-19 Speaker Assembly



Step 19 Attach the Projector screen to the Projector clips on the underside of the Display shelves.

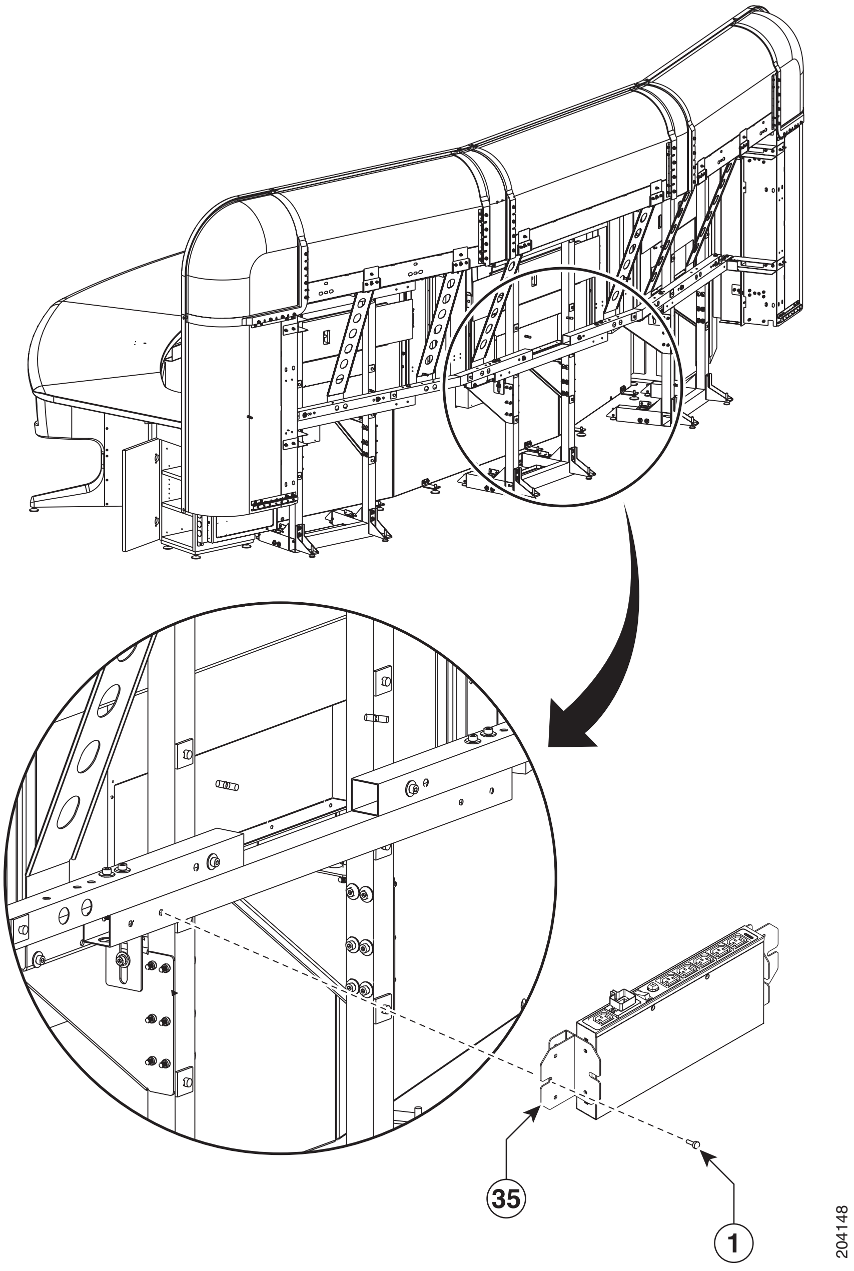
Note Please refer to your Cisco TelePresence Projector Screen Assembly manual for the exact procedures used to build the projector screen. The Projector Screen Assembly manual is included in the projector screen carton.

Figure 7-20 Projector Screen Assembly



Step 20 Attach the auxiliary control unit to its bracket using 5 mm screws; then, attach the unit and bracket to the rear of the display assembly.

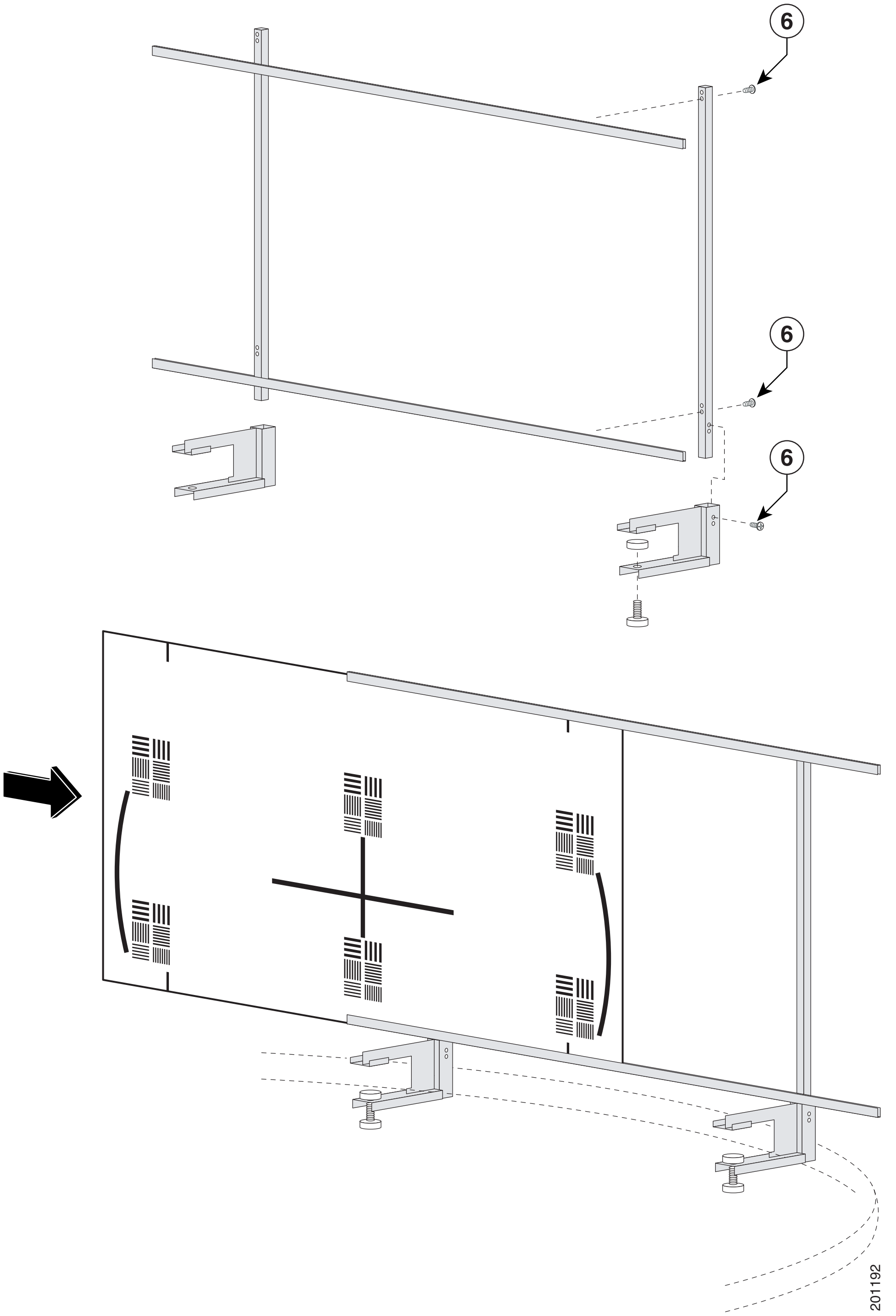
Figure 7-21 *Auxiliary Control Unit*



Step 21 Assemble the Large Camera Target.

When you slide the Camera target into the frame, make sure the target is centered in the frame between the vertical lines at the top and bottom of the target.

Figure 7-22 Camera Target Assembly



CHAPTER 8

Routing Power and Signal Cables

Revised: October 31, 2008, OL-14521-01

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
1	Power distribution units	74-4787-01	4	1	
2	Speaker cable	37-0849-01	3	1	
3	8 m DVI-to-VGA + audio cable	37-0848-01	1	1	
4	6 m video cable	37-0854-01	1	1	
5	3 m (black) Cat6 Ethernet cable	37-0877-01	5	1	
6	10 m Cat6 Ethernet cable, blue	37-0901-01	2	1	
7	7 m power cord	37-xxxx-xx	1	10	See "Appendix B: Region- and Country-Specific Equipment" for specific part numbers.
8	3 m Jumper cord	37-0833-01	9	1	
9	2 m Jumper cord	37-0852-01	1	1	Used for projector.
10	3 m Video-to-DVI cable	37-0853-01	3	1	
11	Cable identification stickers	51-4582-01	3	1	
12	Cable ties	51-4536-01	75	1	
13	Cable tie holders	51-0609-01	75	1	
14	Microphone	74-4743-01	3	1	

Caution Do not power on the PDUs until all the cables are routed and connected.

Warning **Overcurrent protection is provided by branch circuit protection rated 20A.**

Warning **Output receptacles cannot exceed 15A for any one receptacle.**

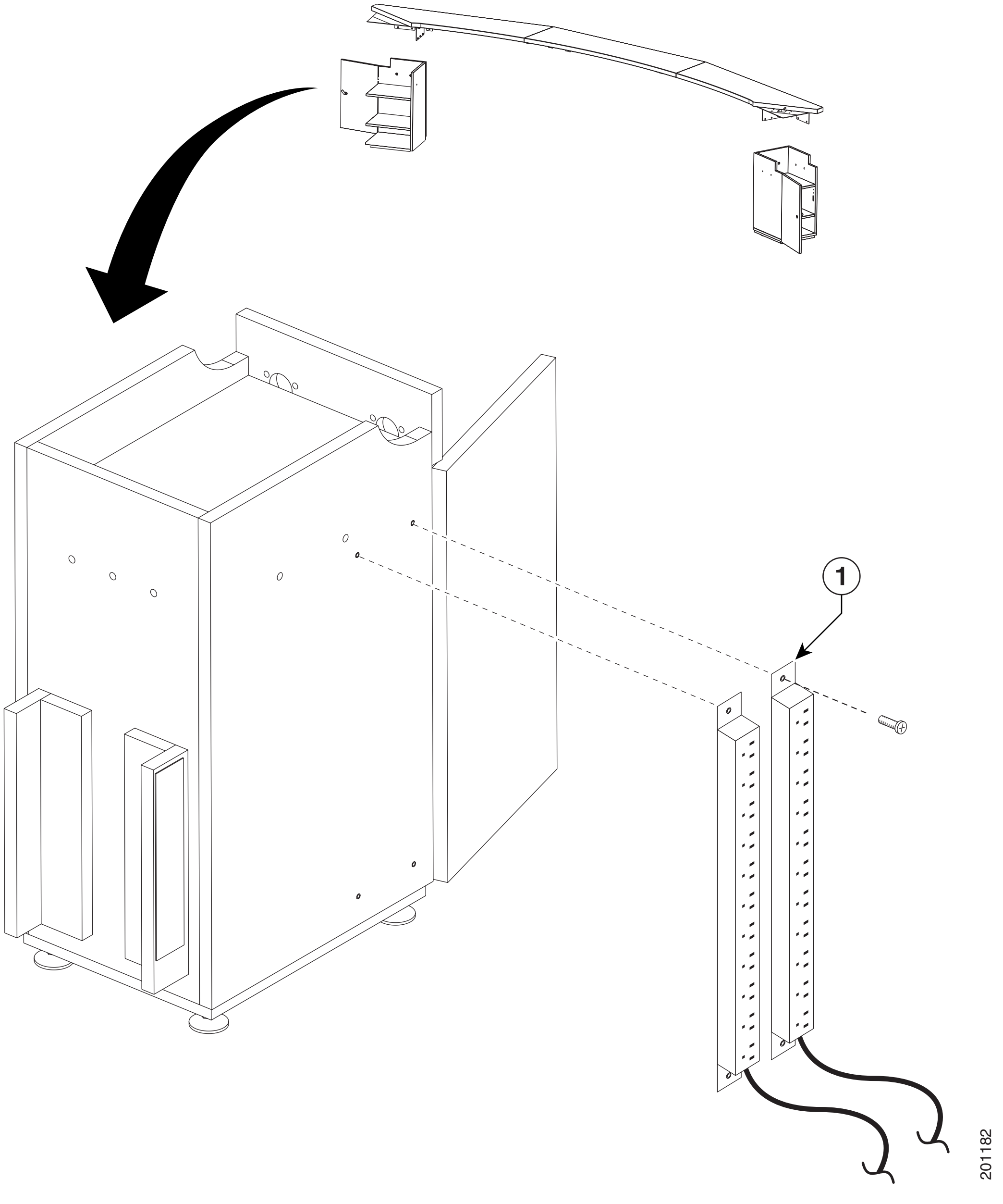
Caution Correct routing of the various power cords to the appropriate PDU is critical for the safety and success of the Cisco TelePresence System 3200 assembly. Each PDU is routed to a different 20A circuit to prevent circuit overload when all the electrical components are properly installed. PDUs should be plugged into their correct wall receptacles as required in the following table.

Left PDU 1 (Located on Left Accessory Cabinet.)	Left 20A AC wall outlet
Left PDU 2 (Located on Left Accessory Cabinet.)	Center-left 20A AC wall outlet
Right PDU (Located on Right Accessory Cabinet.)	Center-right 20A AC wall outlet
Table PDU (Located above the projector under the Center table segment.)	Right 20A AC wall outlet

Step 1 Attach the two left Power Distribution Units (PDU) to the left Accessory cabinet.

The accessory cabinets each have screw holes for two PDUs on one side wall and screw holes for one PDU on the other. When the cabinets are correctly oriented with each door opening out to the side, the right cabinet has the single-PDU side facing the rear wall, and the left cabinet has the double-PDU side facing the rear wall.

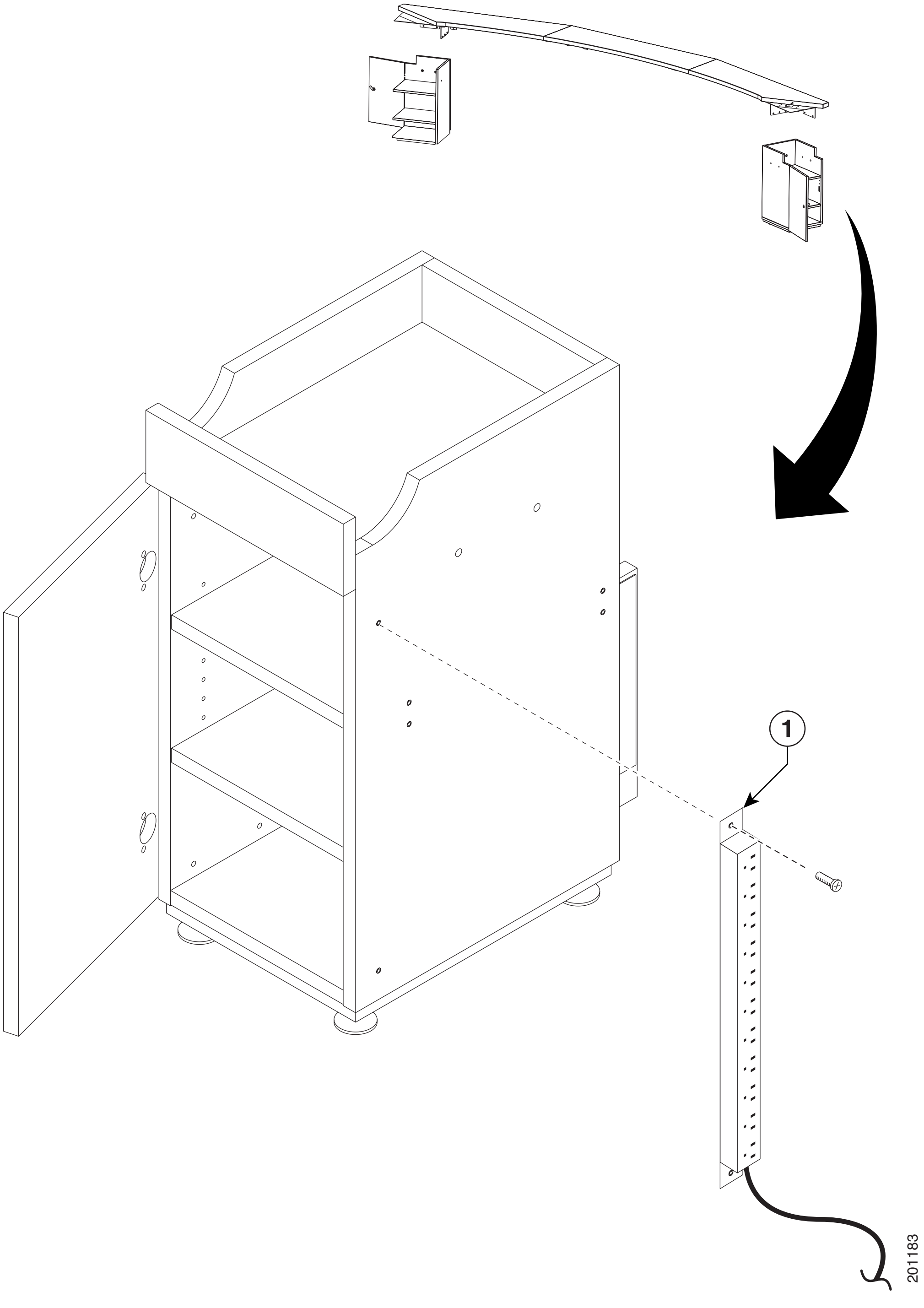
Figure 8-1 ***Dual PDU installation to left accessory cabinet***



Step 2 Attach the right PDU to the right Accessory cabinet.

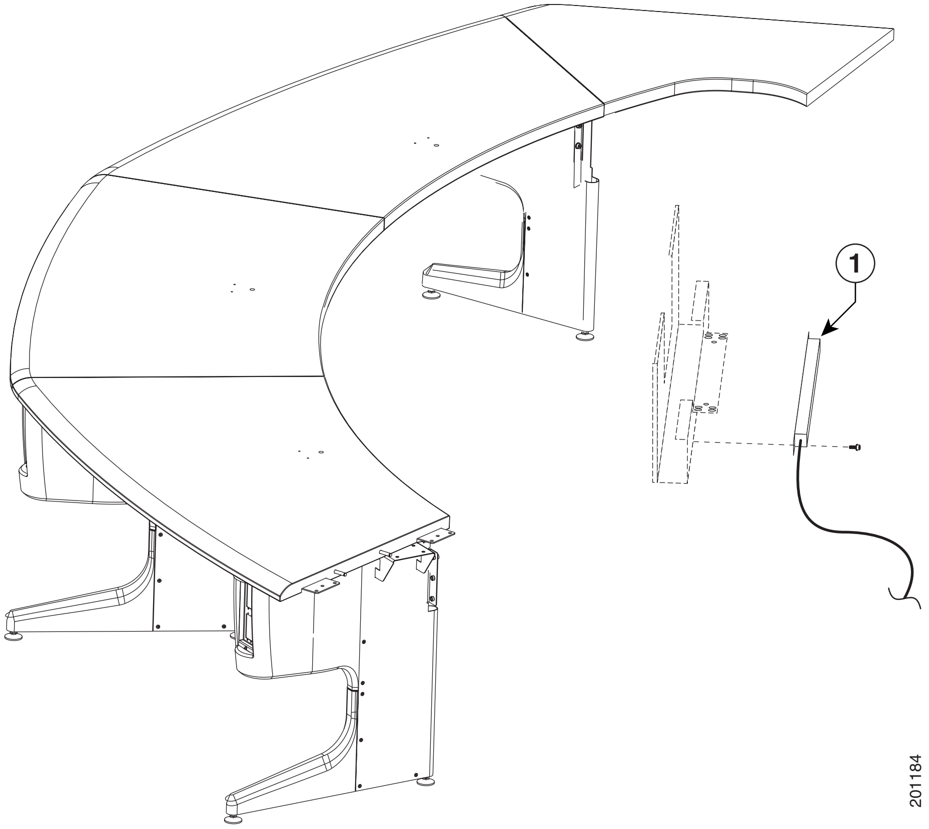
The accessory cabinets each have screw holes for two PDUs on one side wall and screw holes for one PDU on the other. When the cabinets are correctly oriented with each door opening out to the side, the right cabinet has the single-PDU side facing the rear wall, and the left cabinet has the double-PDU side facing the rear wall.

Figure 8-2 Right-side PDU installation to right accessory cabinet



Step 3 Attach the center PDU to the center privacy panel.

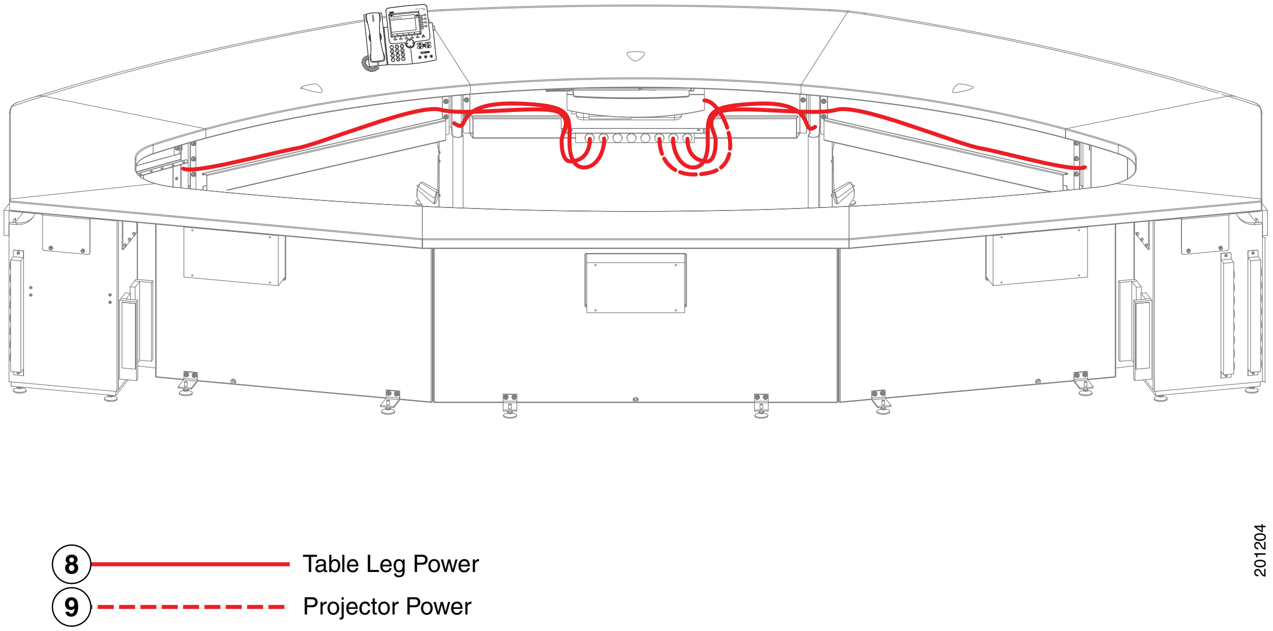
Figure 8-3 Table assembly PDU attachment to the center Privacy panel



Note The PDU power cable should extend from the right side.

Step 4 Route the power cables for the table leg foam bumper I/O modules and the projector.

Figure 8-4 Routing Power Cables for I/O Modules and Projector

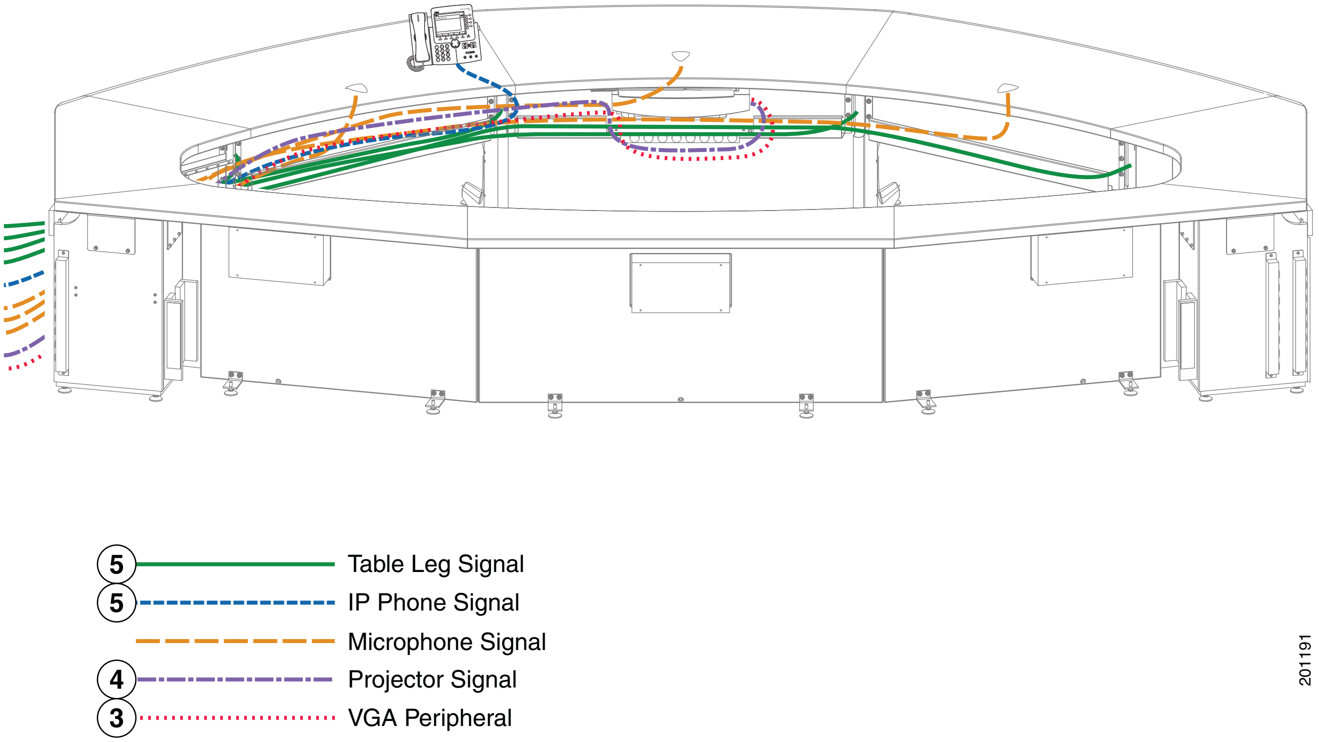


Note The six jumper cords from the I/O modules in the table legs route to the center PDU.

Tip Before plugging the Table leg jumper cords into the Table PDU, label each one. For example, Outer Left Power, Inner Right Power.

Step 5 Route the signal cables from the table assembly.

Figure 8-5 *Routing Signal cables from the Table assembly*

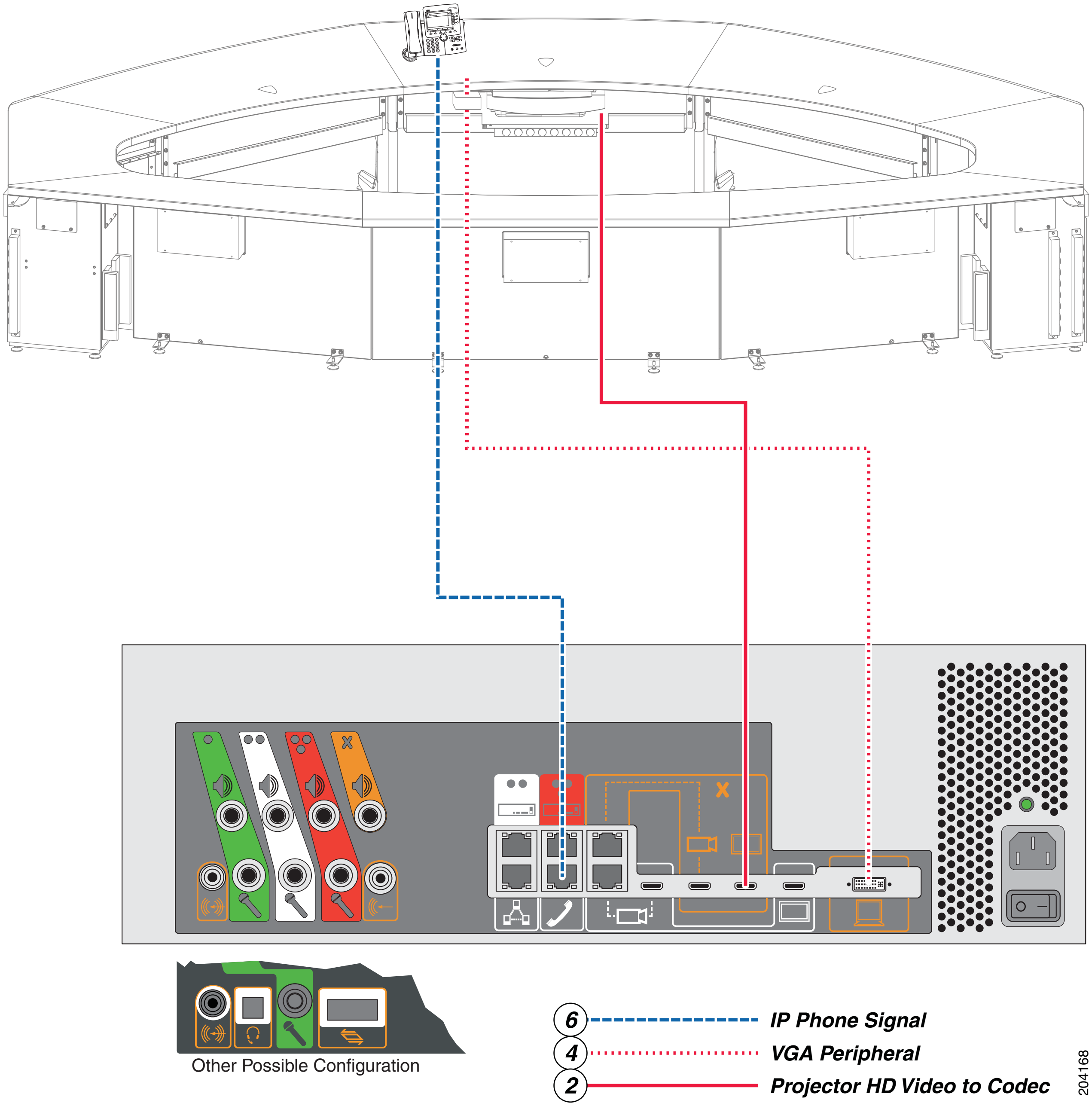

5 Table Leg Signal
5 IP Phone Signal
Microphone Signal
4 Projector Signal
3 VGA Peripheral
201191

Note The Table Leg Signal cables are routed behind the Display structure, along with the other signal cables, but do not plug into any Codec.

Step 6 Connect the Cisco Unified IP Phone, VGA peripheral, and projector HD video cables.

Note The VGA Peripheral cable is the free-hanging cable resting in the VGA module attached to the center Table segment.

Figure 8-6 Cabling the Cisco Unified IP Phone, DVI-to-VGA, and Projector HD Video Cables


Other Possible Configuration
6 IP Phone Signal
4 VGA Peripheral
2 Projector HD Video to Codec
204168

Step 7 Connect the microphone cables.

- If you have a codec with three microphone outputs, connect the microphones using Figure 8-7 as a guide.

  Cable the microphones using the following markings and colors on the codec:

  - A single dot on a green background indicates a center microphone.
  - Two dots on a white background indicate a left microphone.

Note The directions *left* and *right* refer to the assembly as you face it from the front.

  - Three dots on a red background indicate a right microphone.

- If you have a codec with one microphone output and an audio/video extension unit, connect the microphones using Figure 8-8 as a guide.

Figure 8-7   Connecting the Microphones For a Three-Microphone Outlet Codec

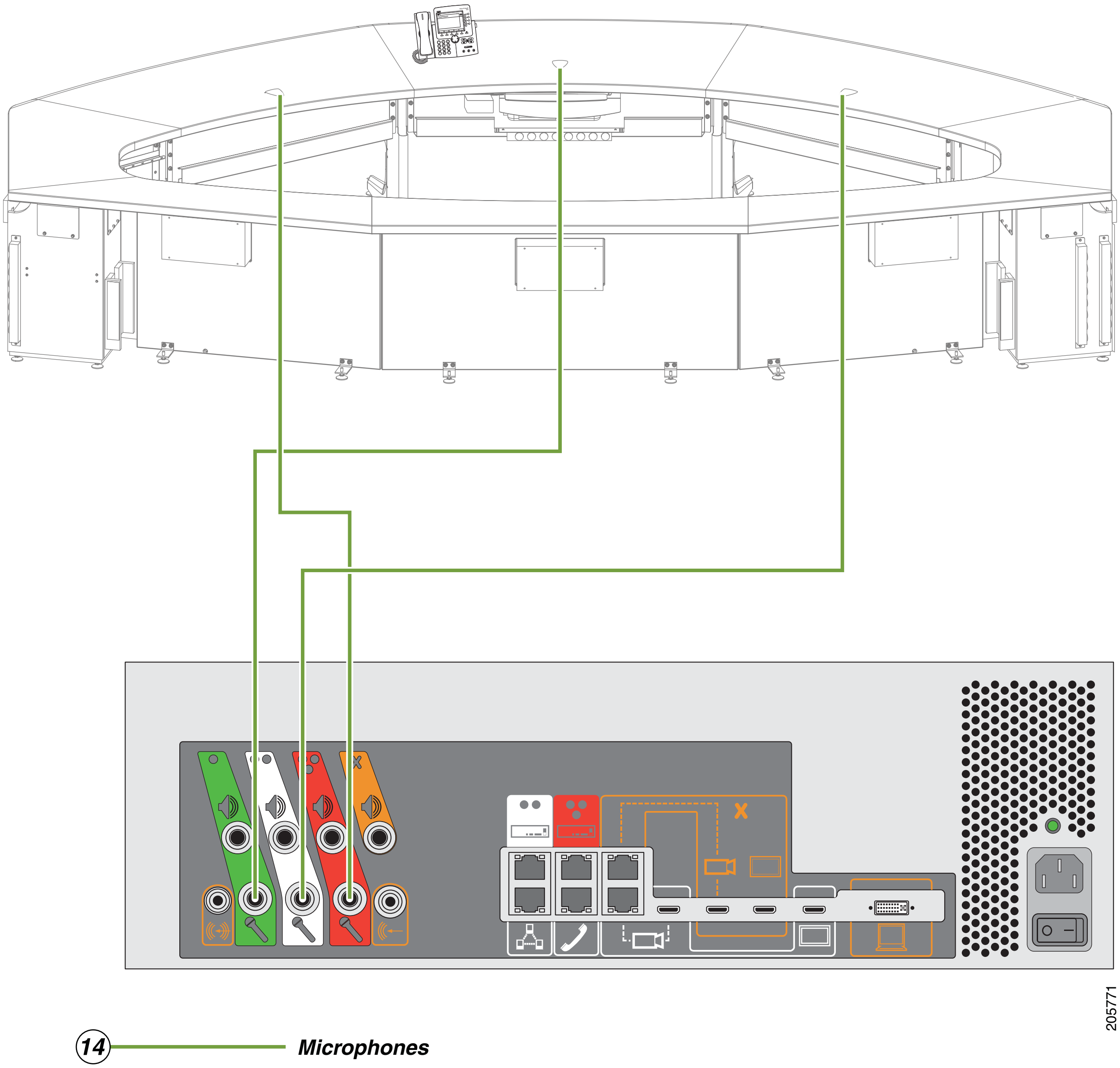
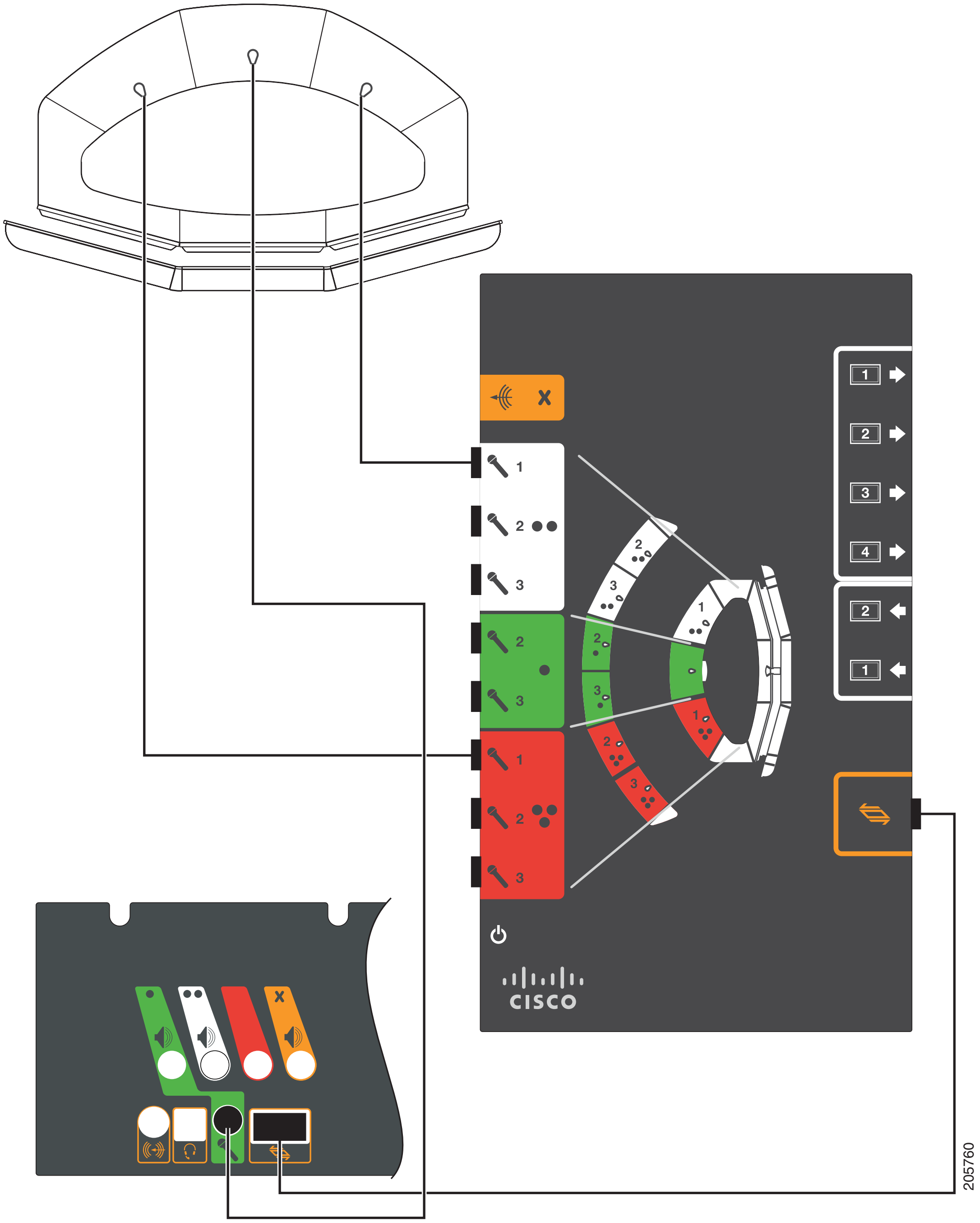

205771
14
Microphones

Figure 8-8 Connecting the Microphones for a Codec with One Microphone Outlet and an Audio/Video Extension Unit

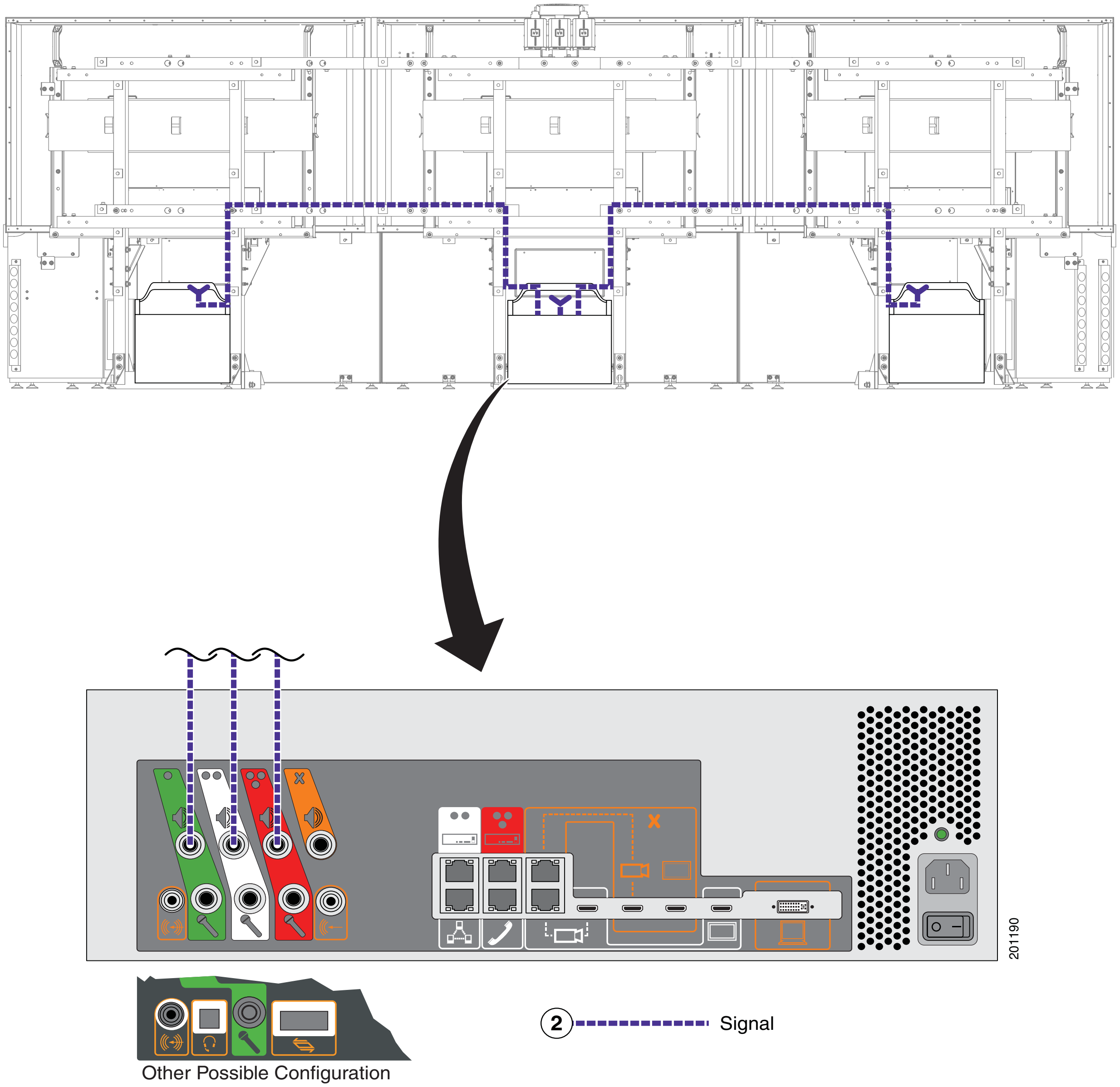

X
1
2
3
2
3
1
2
3
1
2
3
4
2
1
CISCO
205760

Step 8 Connect the speaker cables using the following markings and colors on the codec:

- A single dot on a green background indicates a center speaker.
- Two dots on a white background indicate a left speaker.
- Three dots on a red background indicate a right speaker.

Figure 8-9 shows the speaker cabling. Left and right are reversed.

Figure 8-9 Cabling the Speakers

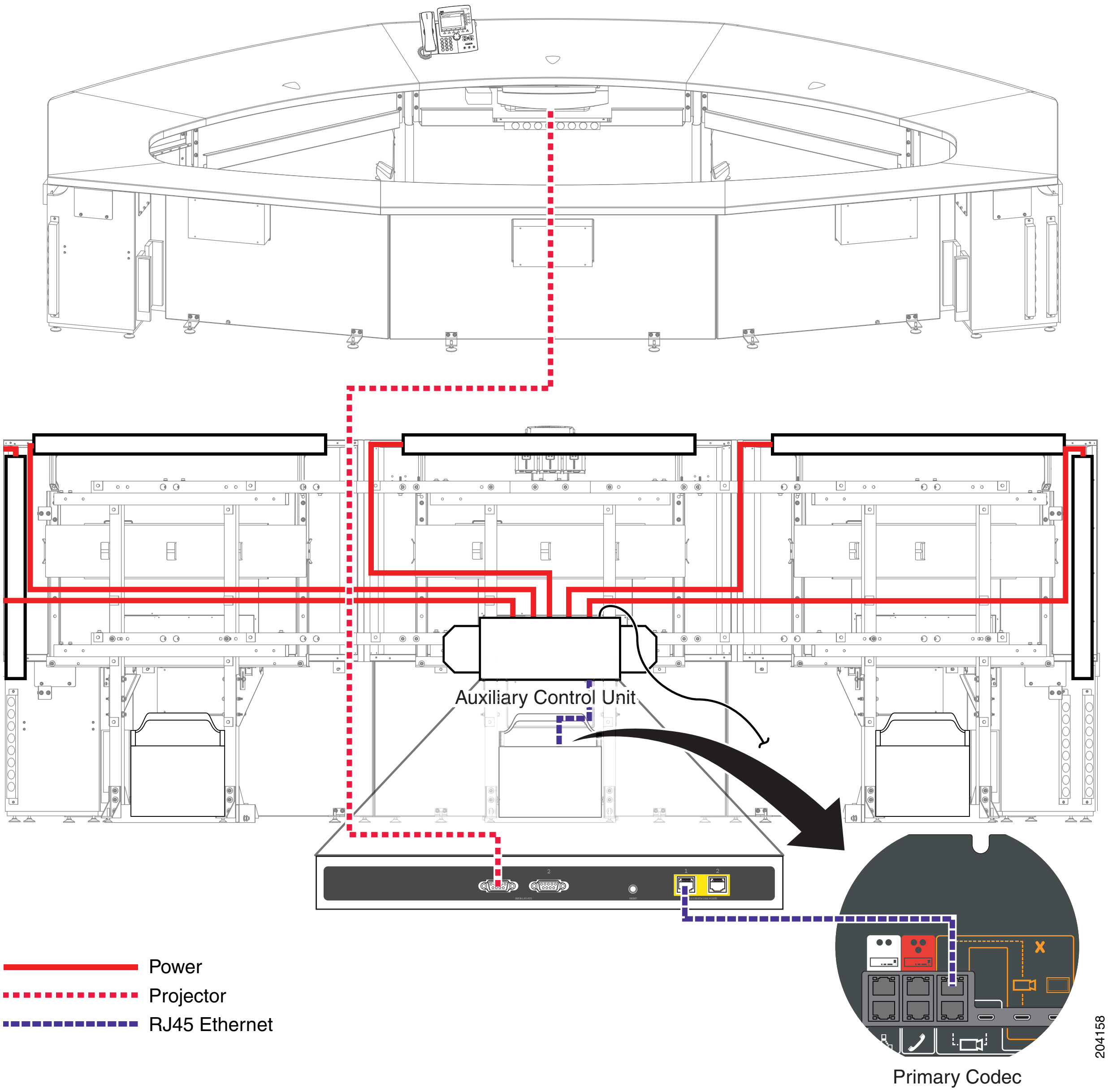


Tip Before plugging cables into the Codec, label each one. For example, Left Speaker, Center Speaker.

Step 9 Connect the following cables:

- Attach and route the power cables for the lighting assembly by connecting the lights to the auxiliary control unit.
- Connect the serial cable between the projector and the auxiliary control unit.
- Connect the Ethernet cables between the codec and the auxiliary control unit.
- Connect the power cord for the auxiliary control unit to a wall outlet.

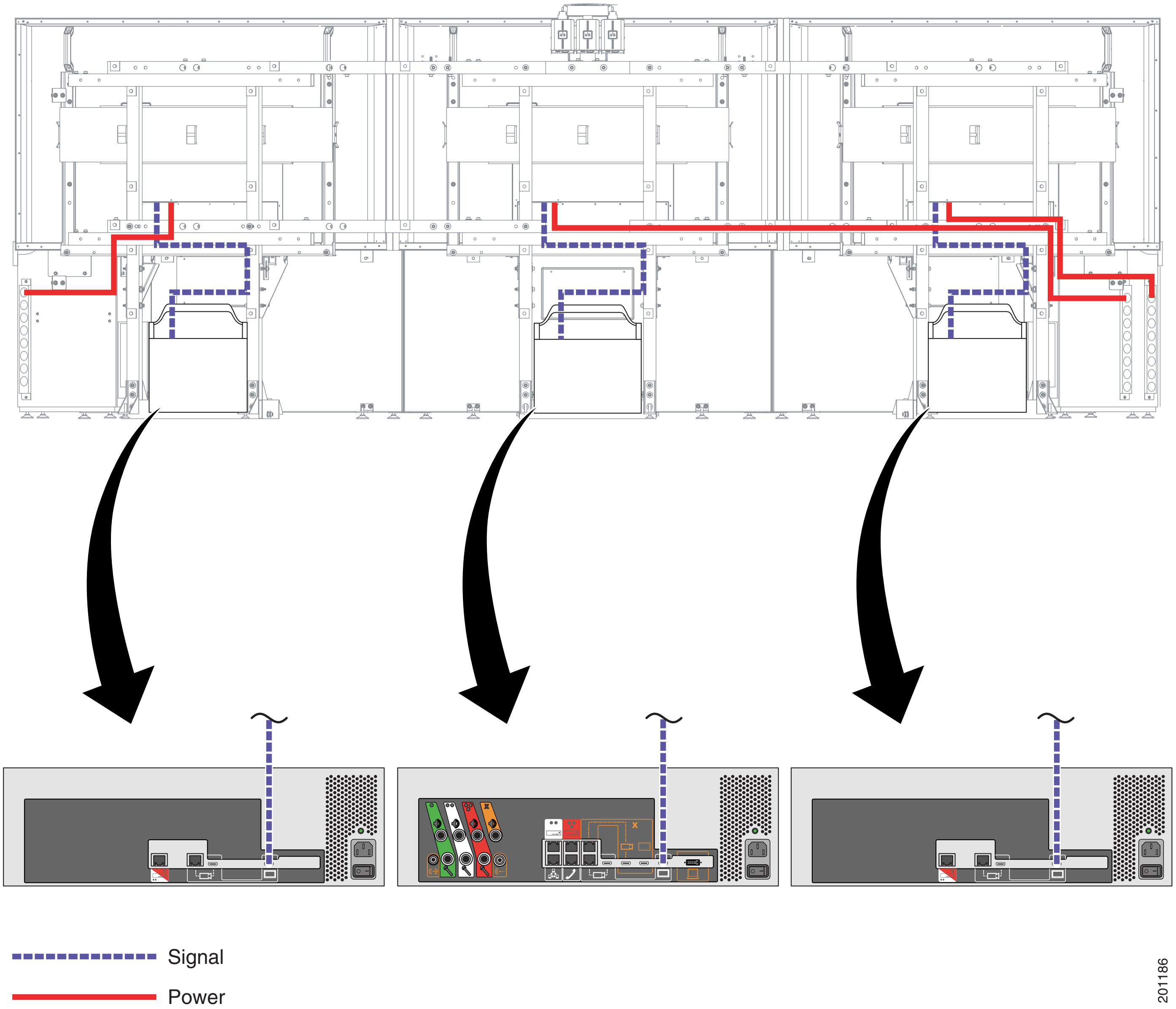
Figure 8-10 Cabling the Lighting Assembly Power Cables and Auxiliary Control Unit-to-Projector Serial Cable



Tip Before plugging the Light fixture power cables into the auxiliary control unit, label each one. For example, 5’ Left light, 4’ Right light.

Step 10 Connect the plasma display cables.

Figure 8-11 Cabling the Plasma displays

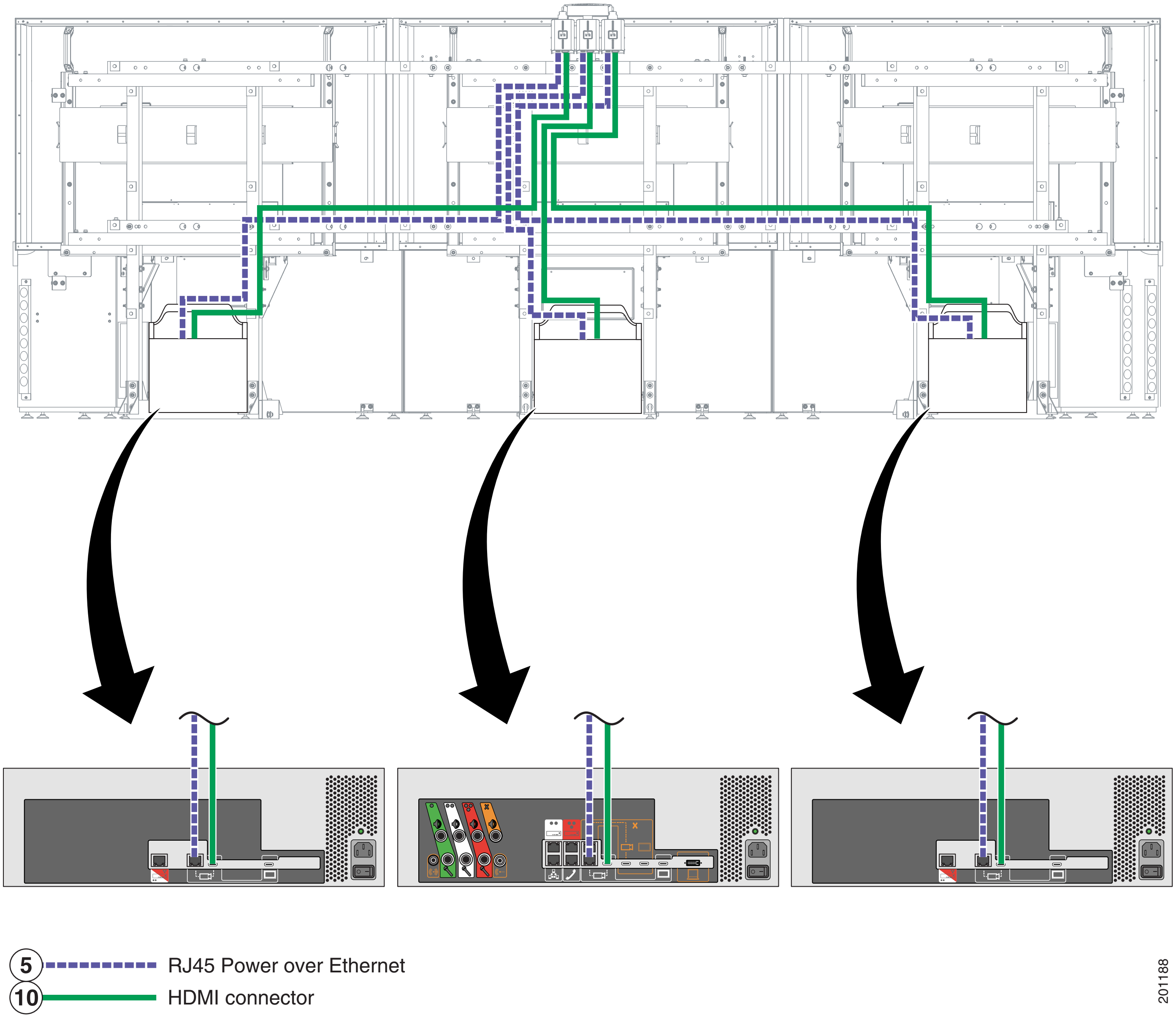


Note Figure 8-11 displays the rear view of the Cisco TelePresence System 3200. Left and right are reversed.

Tip Before you plug cables into a Codec or PDU, label each cable.

Step 11 Connect the camera assembly cables.

Figure 8-12 Cabling the Camera assembly



Note The camera cluster can experience radio frequency interference issues if the camera Ethernet and video cables are routed, bundled, or tied together. Cisco recommends that you route the Ethernet and video cables separately and use cable ties to tie them to opposite sides of the frame.

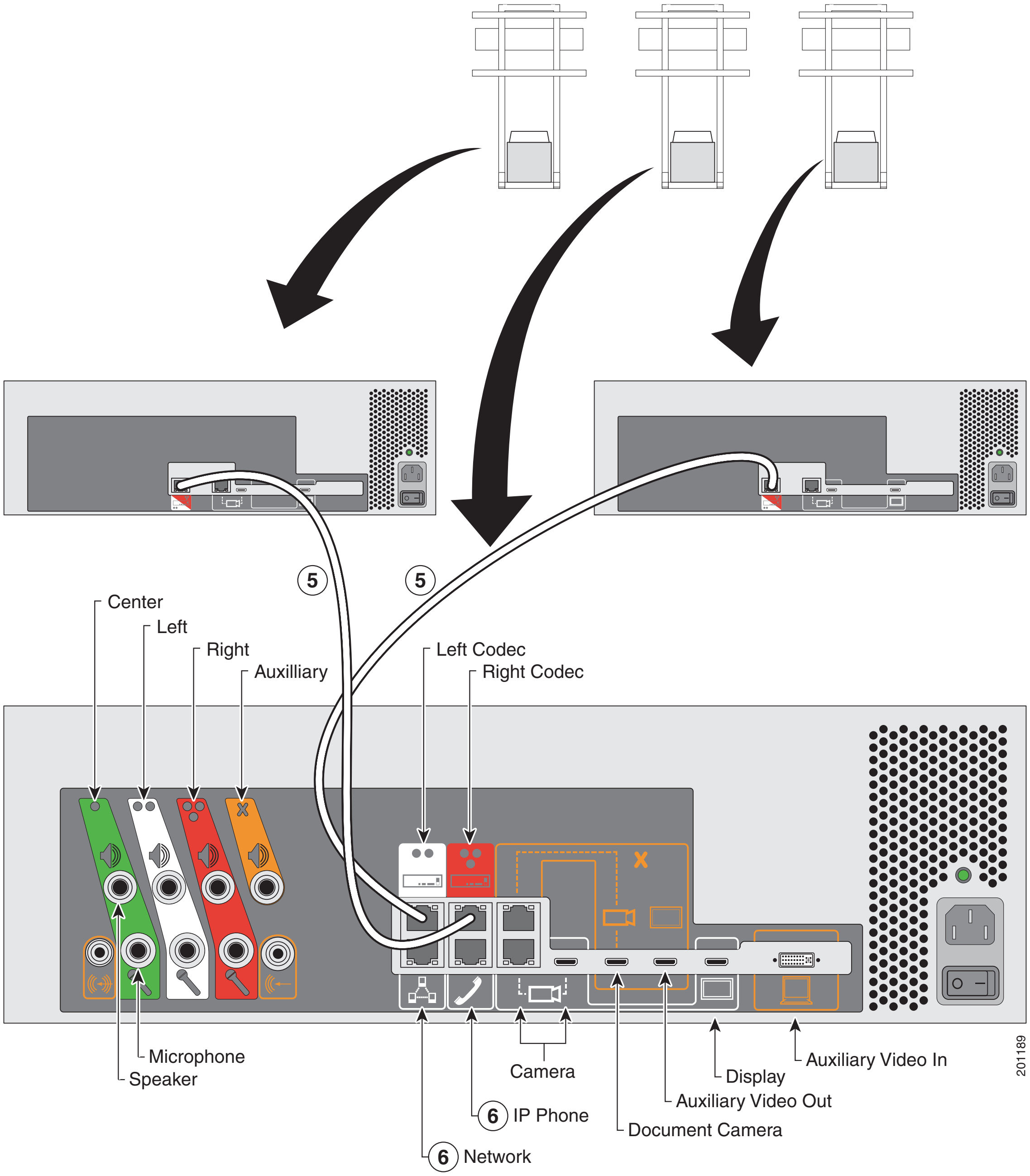
Figure 8-12 displays the rear view of the Cisco TelePresence System 3200. Left and right are reversed.

Tip Before you plug cables into a Codec, label each cable.

Step 12 Connect the codec signal cables.

Note If you ordered a Presentation Codec or Auxiliary Control Unit with your TelePresence system, refer to the *Cisco TelePresence Hardware Options and Upgrade Guide* for cabling instructions.

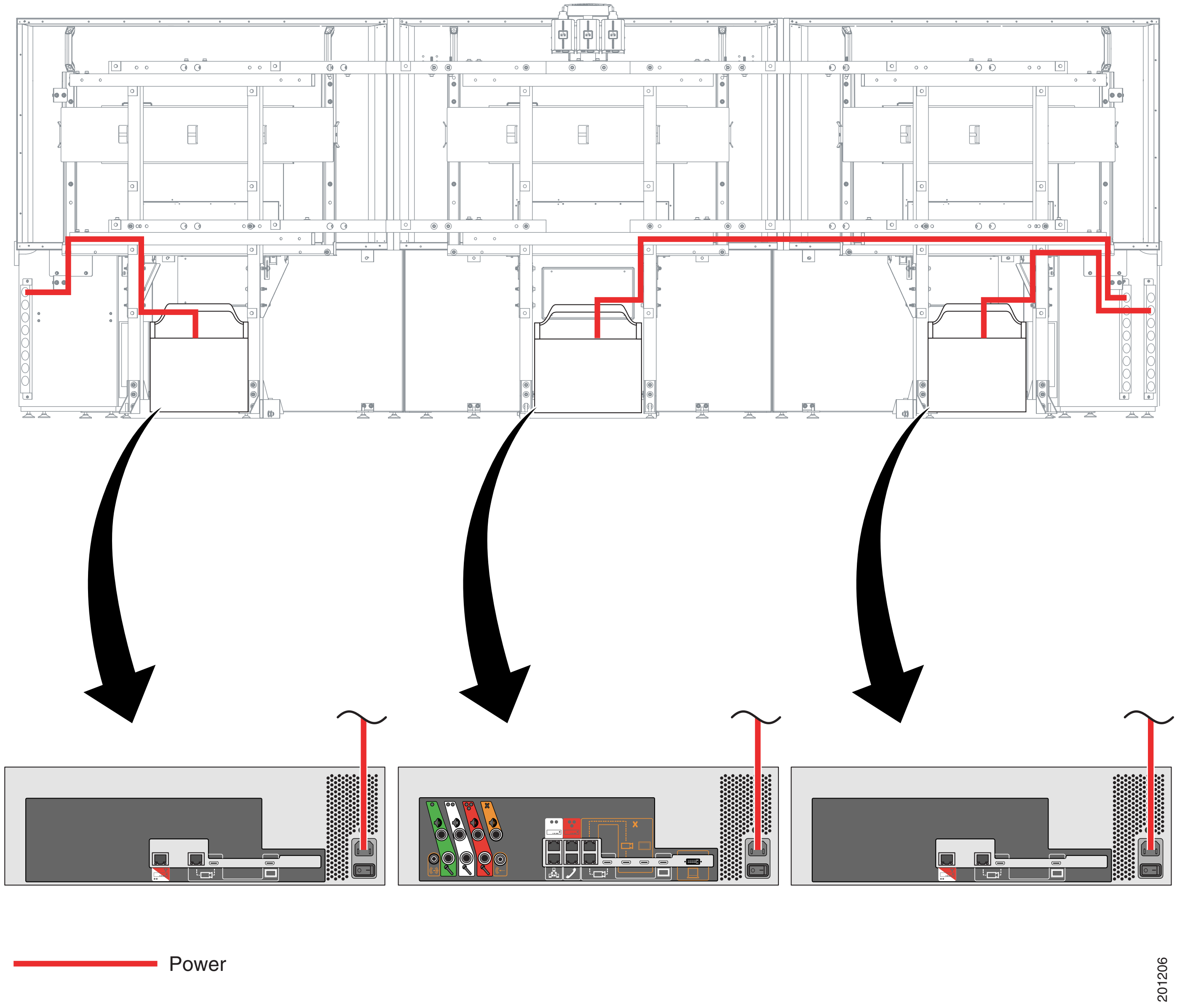
Figure 8-13 Cabling the Codec Signal Cables


5
5
Center
Left
Right
Auxilliary
Left Codec
Right Codec
Microphone
Speaker
Camera
6 IP Phone
6 Network
Document Camera
Auxiliary Video Out
Display
Auxiliary Video In
201189

Note Figure 8-13 displays the rear view of the Cisco TelePresence System 3200. Left and right are reversed.

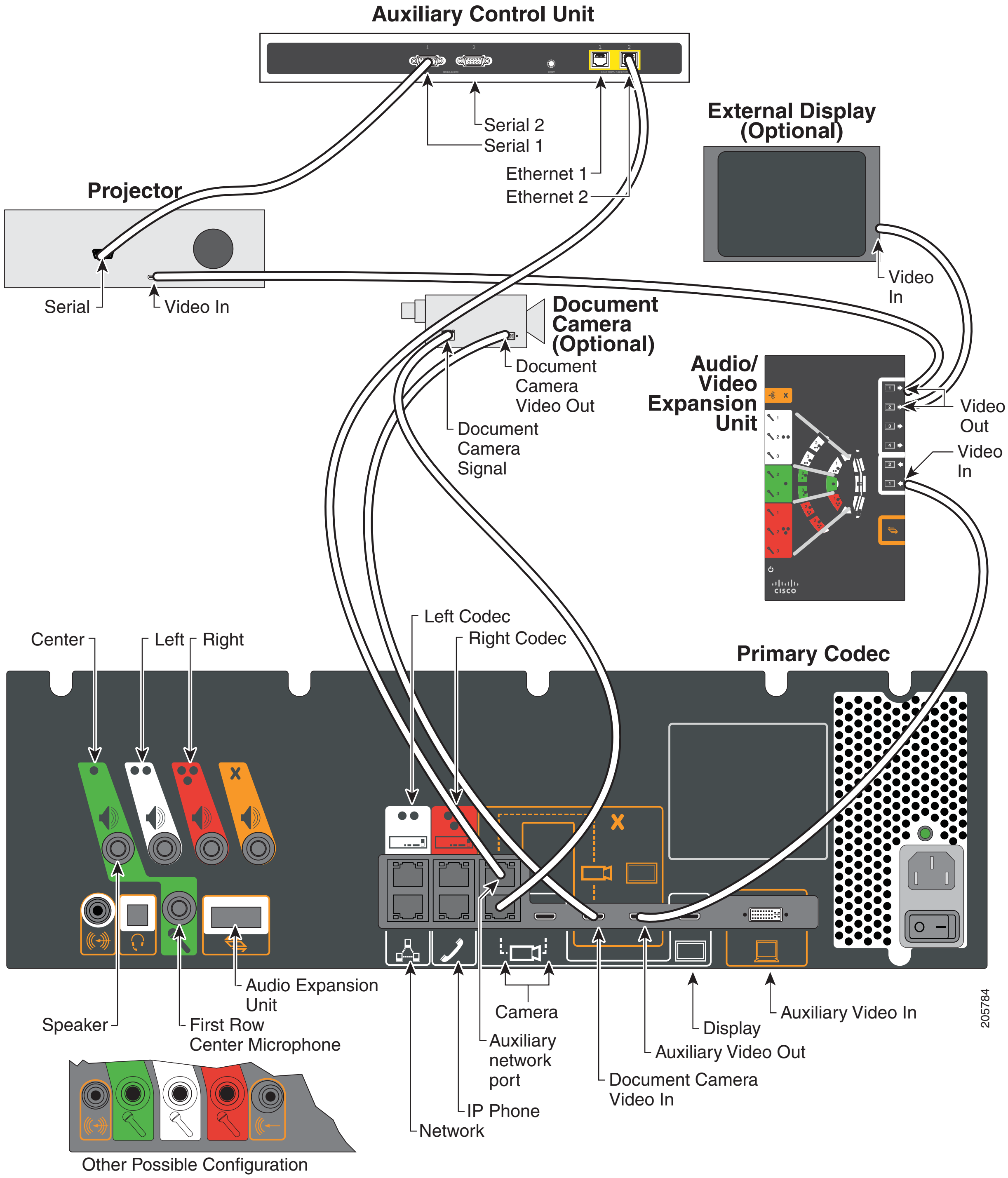
Step 13 Connect the codec power cables.

Figure 8-14 Routing the Codec Power Cables



Step 14 (Optional) If your installation uses an optional external display or a document camera, install and route the cabling.

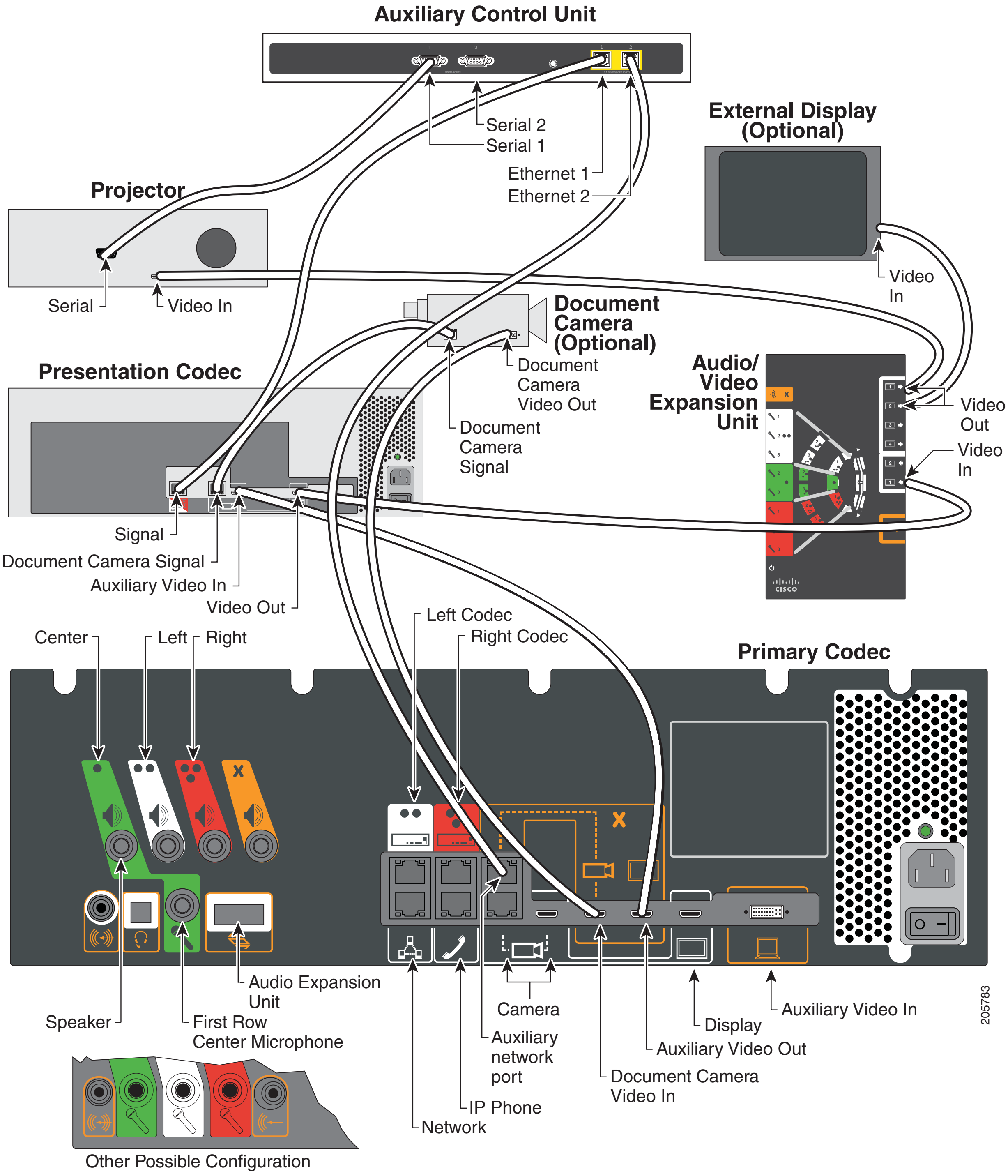
Figure 8-15 Cabling Diagram: CTS-3000 Installations with an External Display and Document Camera


Auxiliary Control Unit
Serial 2
Serial 1
Ethernet 1
Ethernet 2
External Display
(Optional)
Projector
Serial
Video In
Video
In
Document
Camera
(Optional)
Document
Camera
Video Out
Document
Camera
Signal
Audio/
Video
Expansion
Unit
Video
Out
Video
In
Left Codec
Right Codec
Center
Left
Right
Primary Codec
Audio Expansion
Unit
Speaker
First Row
Center Microphone
Camera
Auxiliary
network
port
IP Phone
Network
Display
Auxiliary Video In
Auxiliary Video Out
Document Camera
Video In
Other Possible Configuration
205784

Step 15 (Optional) If your installation uses an external display or a document camera with a presentation codec, install and route the cabling.

Refer to the "Options for the Cisco TelePresence System 3000" chapter of the *Cisco TelePresence Hardware Options and Upgrade Guide* for more information about the presentation codec.

Figure 8-16 Cabling Diagram: CTS-3000 Installations with a Presentation Codec, External Display and Document Camera


Auxiliary Control Unit
Serial 2
Serial 1
Ethernet 1
Ethernet 2
External Display (Optional)
Projector
Serial
Video In
Video In
Document Camera (Optional)
Document Camera Video Out
Document Camera Signal
Presentation Codec
Audio/ Video Expansion Unit
Video Out
Video In
Signal
Document Camera Signal
Auxiliary Video In
Video Out
Left Codec
Right Codec
Center
Left
Right
Primary Codec
Audio Expansion Unit
Speaker
First Row Center Microphone
Camera
Auxiliary network port
IP Phone
Network
Display
Auxiliary Video In
Auxiliary Video Out
Document Camera Video In
Other Possible Configuration
205783

CHAPTER 9

First-Time Setup

Revised: February 6, 2009, OL-14521-01

After you have assembled the Cisco TelePresence System (CTS), you set up the individual system components (such as displays and cameras) using **Hardware Setup**, located under **Troubleshooting** in the CTS Administration software. This chapter explains how to initially set up CTS components and contains the following sections:

- Loading CTS Administration Software, page 9-1
- Setting Up CTS Components, page 9-4

Note You cannot perform diagnostics during an active Cisco TelePresence system call.

Parts List

Key	Part Description	Part Number	Qty	Ctn	Notes
Camera Hood Assembly (Figure 9-7)					
1	Camera assembly	68-2900-xx	1	2	
2	Camera hood cover: top		1	2	
3	Camera hood cover: bottom		1	2	
7	M4 x 20mm Pan Head screws	48-0654-01	4	2	

Loading CTS Administration Software

CTS Administration Software is factory-installed on each codec and loads during initial bootup.

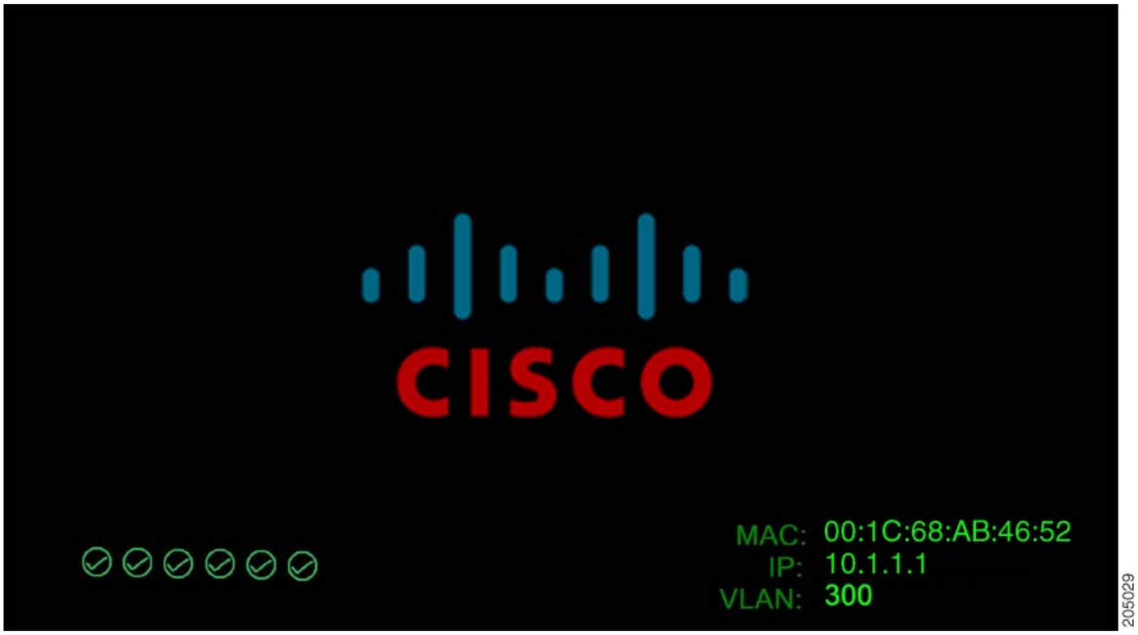
To load CTS Administration Software:

Step 1 Power on the three PDUs in that are located on the accessory cabinets and the single PDU that is underneath the first row table (near the projector). If you use the Auxiliary Control Unit, power on that unit as well.

Note Make sure that you power on all codecs within 30 seconds to avoid power on detection failure.

After you turn on the codecs, the displays associated with each codec becomes active. CTS displays green check marks on all displays to show bootup progress. Bootup is complete when the system displays six check marks as shown in Figure 9-1.

Figure 9-1 Bootup Completed

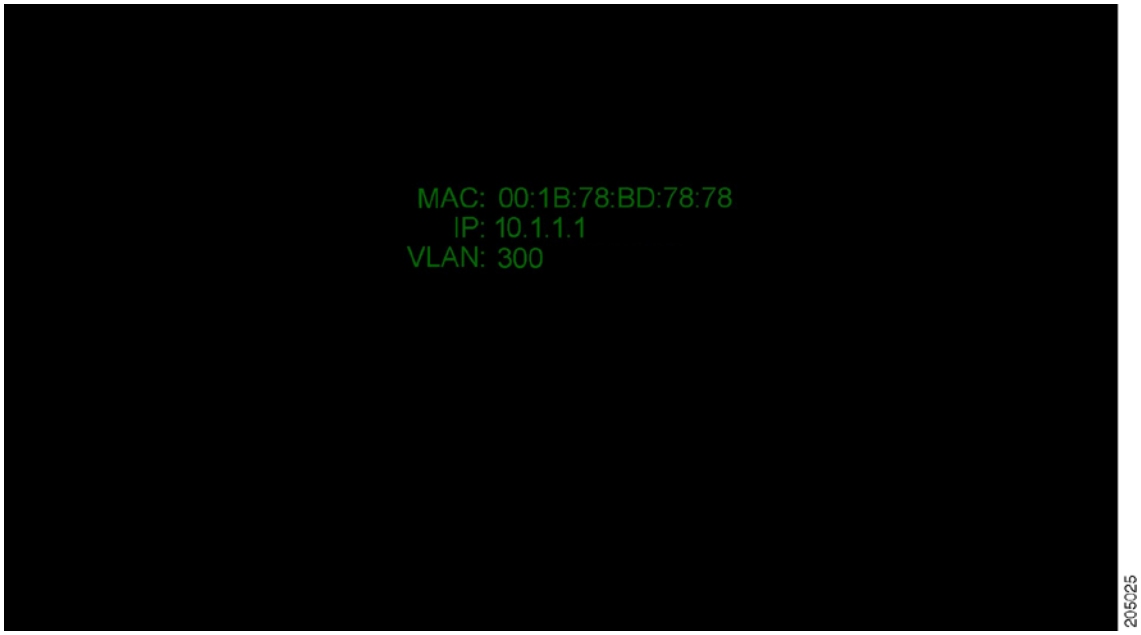


MAC: 00:1C:68:AB:46:52
IP: 10.1.1.1
VLAN: 300

Note If the last check mark displayed is a red "X," there has been a compact flash error. Please contact Cisco Technical Support.

After bootup completes, make a note of the IP address that displays on the center of the screen as shown in Figure 9-2. You use that information to log in to the Cisco TelePresence System Administration. This IP address displays until you log in to Cisco TelePresence System Administration or use Secure Shell (SSH) to log in to the CTS-3000.

Figure 9-2 System IP Address



```
MAC: 00:1B:78:BD:78:78
   IP: 10.1.1.1
VLAN: 300
```

Note Note If the IP address that displays is 192.168.100.2, the CTS-3000 could not contact the DHCP server or your system does not use DHCP. If your network does not use DHCP, navigate to **Configuration > IP Settings**, change the DHCP Enabled setting to **No**, and specify a static IP address, subnet mask, gateway and DNS server.

Step 2 After successful bootup, the CTS Administration Software loads. When CTS Administration Software loading is complete, the Cisco IP telephone displays a welcome message, which displays the IP address from which you will be able to access the CTS Administration software. The welcome screen only appears the first time the system is booted up after initial installation or after a factory reset.

Note The telephone will not be registered at this time. It will show a directory number of 7000 but the telephone will not function as a telephone at this time.

Step 3 Make a note of the IP address that appears on the display. You use this IP address to log in to the Cisco TelePresence System administration console.

Step 4 If you have not already done so, configure the your Cisco Unified IP Phone in the Cisco Unified Communications Manager IP Phone Device page. For detailed instructions to configure Cisco Unified Communications Manager for use with your CTS-3000, refer to the *Cisco Unified Communications Manager Installation Guide for the Cisco TelePresence System* for your software release.

Step 5 From the Cisco IP telephone welcome page, press **Next**. The system reboots.

Note The system might reboot several times during the initial startup process.

Step 6 Open a browser on a computer that is connected to the network.

Step 7 In the URL field, type the IP address that you obtained in Step 3 and press **Enter**. The browser launches Cisco TelePresence System Administration.

Note If you need to obtain the IP address, complete the following steps:

a. On the IP phone, locate Manual at the bottom of the screen and press the Manual soft key.

> **Note** If you cannot locate the Manual button, proceed to Step b.

b. Locate Info at the bottom of the screen and press the Info soft key.

c. Scroll down to the IP Address listing and copy the address.

Step 8 Log in to the system by entering the following information:

Step 9 Log in using the following:

  - Username: **admin** (case sensitive)
  - Password: **cisco** (case sensitive)

Configuring an Alternate TFTP Server (Optional)

If you need to use an alternative TFTP server, configure the parameters for the alternative TFTP server and related Cisco IP phone parameters in Unified CM in the Cisco Unified Communications Manager IP Phone Device page. For instructions to configure an alternate TFTP server, refer to the "Configuring the Cisco TelePresence System" chapter of the *Cisco TelePresence System Administrator's Guide* for your software release.

Note If you are using the TFTP address that DHCP supplies for Cisco Unified Communications Manager, do not perform this action.

Setting Up CTS Components

To set up the CTS components:

Step 1 Using the IP address displayed in the Cisco IP telephone welcome message, log in to the CTS Administration software.

Step 2 From **Troubleshooting**, choose **Hardware Setup** to initially set up the components in the Cisco TelePresence system. Cisco suggests that you set up CTS components in the following order:

- Setting Up the Displays, page 9-5
- Setting Up the Cameras, page 9-7
- Setting Up the Speakers, page 9-13
- Setting Up the Microphones, page 9-13
- Setting Up the Projector, page 9-15
- Other Devices, page 9-22

Setting Up the Displays

A display is set up correctly when the color on the display has been adjusted for the lighting in the meeting room. Each display must be set up individually.

- From the **Hardware Setup** page under **Troubleshooting**, click the **Display** radio button.
- Click **Start** to begin the adjustment process.

Each display in the meeting room should now be showing a set of horizontal grey bars and that display's relative position. Select the color temperature of the lighting in the meeting room and click **Apply**.

Selecting the Light Level

When adjusting the images on the display screens for the Cisco TelePresence system, you must take the color temperature of the ambient light in the room into consideration.

Sources of light in most rooms are either incandescent light bulbs that use tungsten filaments or fluorescent lights. Each of these light sources, and the amount of light in terms of lumens or watts, produces a different color temperature. This color temperature is sometimes expressed using terms such *cool*, *warm*, or *daylight*, but can be expressed more precisely in kelvins (K) as a numeric value.

Following are the temperatures that can be selected for adjusting the image on the Cisco TelePresence display screens:

- 3500 K
- 4000 to 4100 K (recommended setting)
- 5000 K
- 6500 K
- 7500 K

In many cases, the color temperature is printed on the light bulb. If you are unable to ascertain the type and color temperature of light bulbs in the meeting room, experiment with color temperature settings until the color and images on the display screen look lifelike.

Troubleshooting Displays

Use Table 9-1 to troubleshoot problems with the images on the displays.

Table 9-1 Troubleshooting Chart for Display Problems

Problem	Possible Cause	Action
Cisco TelePresence 3000/3200 only Power-on test indicates the displays turn on in the wrong sequence. The normal power on sequence is the left, center, then right display screen.	Video cable is not connected to its corresponding codec connector. Ethernet cable from secondary codec is not plugged into the correct port on the primary codec.	Check that the cable from each display is plugged into the correct connector on its corresponding codec. Plug the video-to-video cable into the display connector on the correct codec, as follows. • Plug the center display into the primary codec. • Plug the participant's left display into the left secondary codec. • Plug the participant's right display into the right secondary codec.
No image.	Power cable is not plugged in. Power switch on the back of the display is off.	Check power connections and switches on each display.
No image.	The display has no image when you are between calls.	No image expected. Enable a display test from the Web user interface to place the displays in test mode.
No image.	Video cable is not connected.	(CTS-1000 only) Check that the LED is lit at the bottom front of each display and is either green or amber. Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system, but no image is seen on the display.

Setting Up the Cameras

The cameras are set up correctly when images are centered and in focus on the display screens and the white balance has been configured. The hardware setup software provides a camera Auto Adjust feature and a way to use targets to fine-tune the camera's focus.

Attach the Camera Target

Two camera targets are provided with the Cisco TelePresence system: a large white target and a smaller target. You attach the large white target to the table prior to performing Auto Adjust (white balancing).

Attach the large Camera target to the corresponding Table segment, with the clamps matching the counterbore feature under the table. Center the target on the edge of the table and standing vertical with the clamps underneath the table holding it tight. The target pattern should face the camera.

Start the Software Setup

- From the **Hardware Setup** page under **Troubleshooting**, click the **Camera** radio button.
- Click **Start** to begin the camera setup. You should see output from each camera in the appropriate camera display area.
- Click **Setup** under the image of a display screen to begin adjustments for the camera focused on that screen.

If you need further information about testing or adjusting this device, click **Help** in the content area or see the troubleshooting charts in this section.

Note Make sure that the table edge is between the hash marks on both sides of the display.

Auto Adjust

- After attaching the large white camera target to the table, click **Auto Adjust**.

  This action allows software to adjust the camera settings automatically. You will see various images and colors on the displays during the adjustment. Auto Adjust takes approximately 20 seconds.

Align the Camera

- Click **Show Camera Target**.
- Using the zoom ring on the camera lens, and the left/right, up/down, and rotation adjustment screws on the camera, perform the following adjustments:
  - Make manual adjustments to the camera focused on the target to align the red plus sign to the center plus sign on the target.
  - For the center display, zoom and align the camera so that the curved lines on each side of the target touches the sides of the display.
  - For the left display, zoom and align the camera so that the curved line on the right side of the display touches the red adjustment line at the right edge of the display to corresponding lines on the target. On both sides of the display, you will see two small red hash marks. Adjust the camera so that the edge of the table is positioned vertically exactly between the hash marks on either side of the display.

    See Figure 9-3 for the location of the adjustment screws on the camera. See Figure 9-4, Figure 9-5, and Figure 9-6 for the correct placement of the curved lines and plus signs on the camera target.

Note If one of the left/right screws is covered by the camera cable, use the other screw to make all left/right adjustments.

Figure 9-3 Camera Mounting Plate

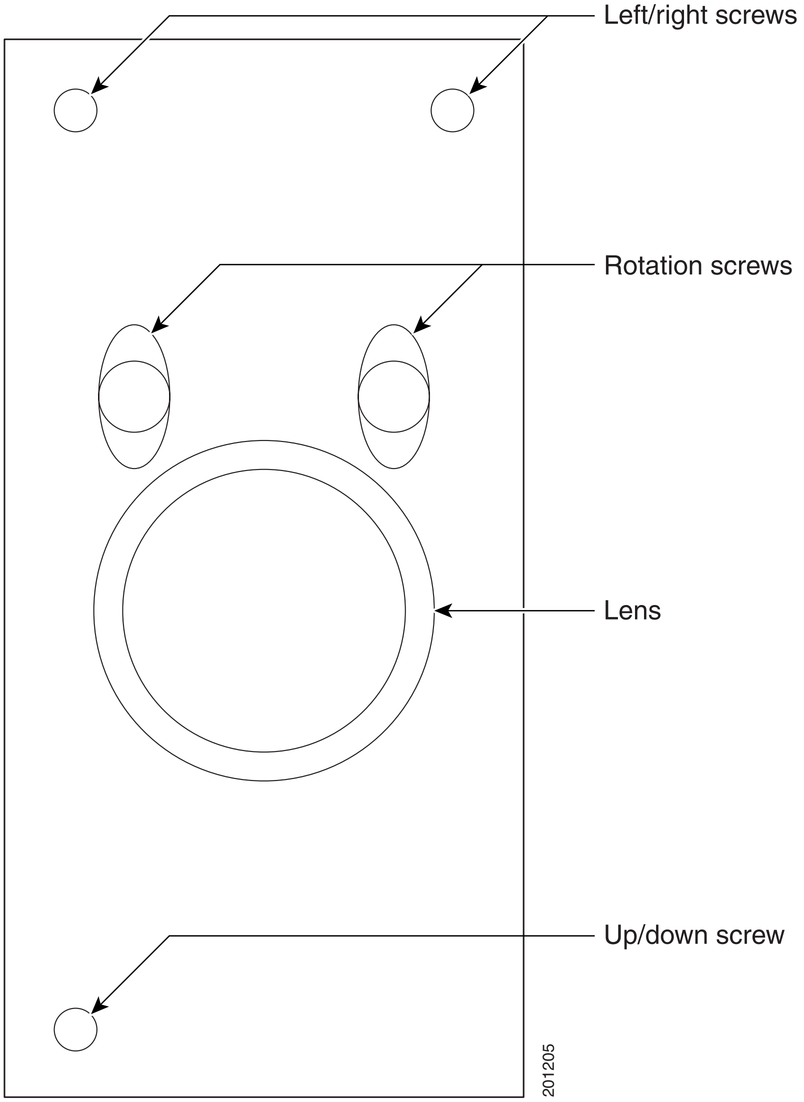

Left/right screws
Rotation screws
Lens
Up/down screw
201205

Figure 9-4 Correct Camera Target Alignment—Center Display

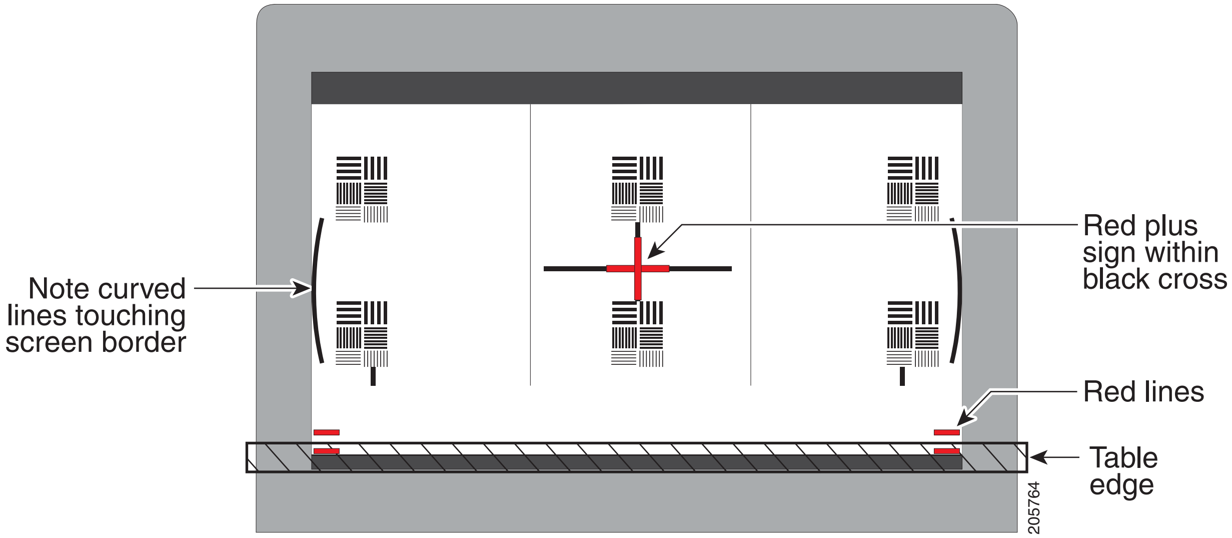

Note curved lines touching screen border
Red plus sign within black cross
Red lines
Table edge
205764

Figure 9-5 Correct Camera Target Alignment—Right Display

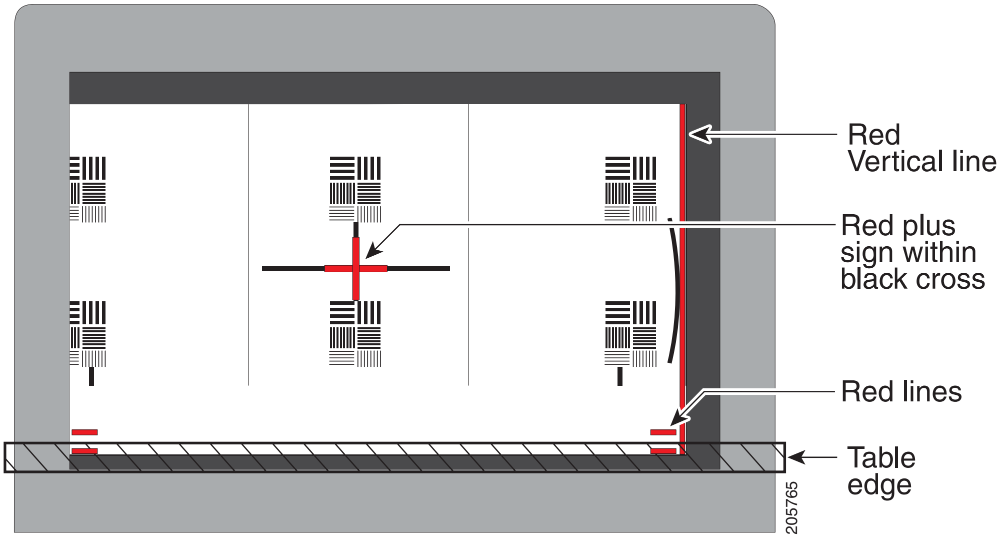
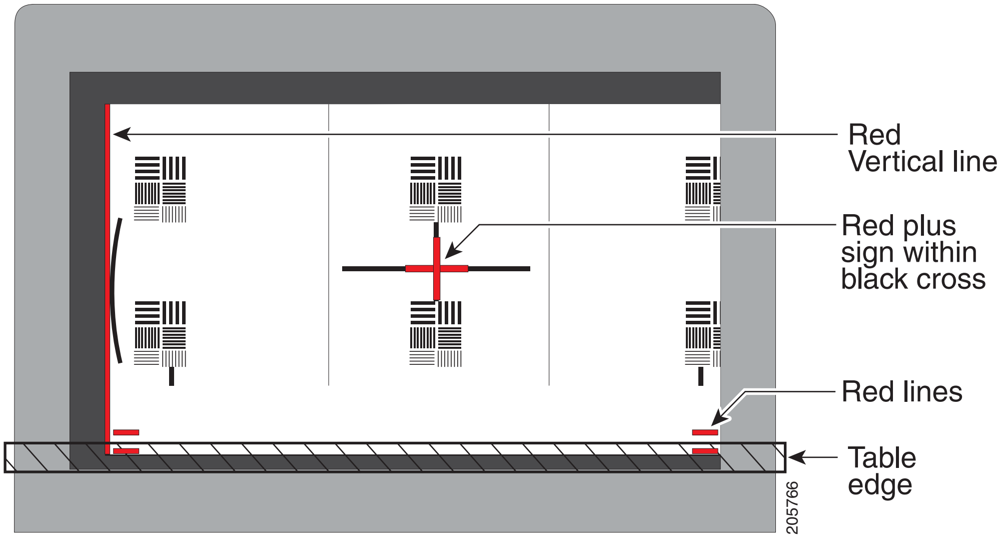

Red Vertical line
Red plus sign within black cross
Red lines
Table edge
205765

Figure 9-6 Correct Camera Target Alignment—Left Display



- Click **Hide Camera Target** to remove the alignment images.
- Click **Done** when you complete the adjustment.

Show All Camera Targets

- Click **Show All Camera Targets** to align each camera independent of the other cameras.

Flipping the Video Image

- Click **Flip Video on Each Display** to display a mirror image—meaning to simulate the image that attendees will see—for the selected screen(s). Use this feature to make sure all three cameras are vertically aligned.

Focus the Camera

- Place the small target on the table.
- Click **Setup**, then click **Show Focus Target**.
- Adjust the small target so that the green box encloses some of the patterns on the small target.
- Adjust the focus ring on the camera lens so the lines on the target are in focus. The ring is labeled “N – 8”. The thumbscrew (or 0.9 mm Allen wrench) is used to unlock the focus ring.
- Click **Hide Focus Targets**, then click **Done** when you complete the adjustment.

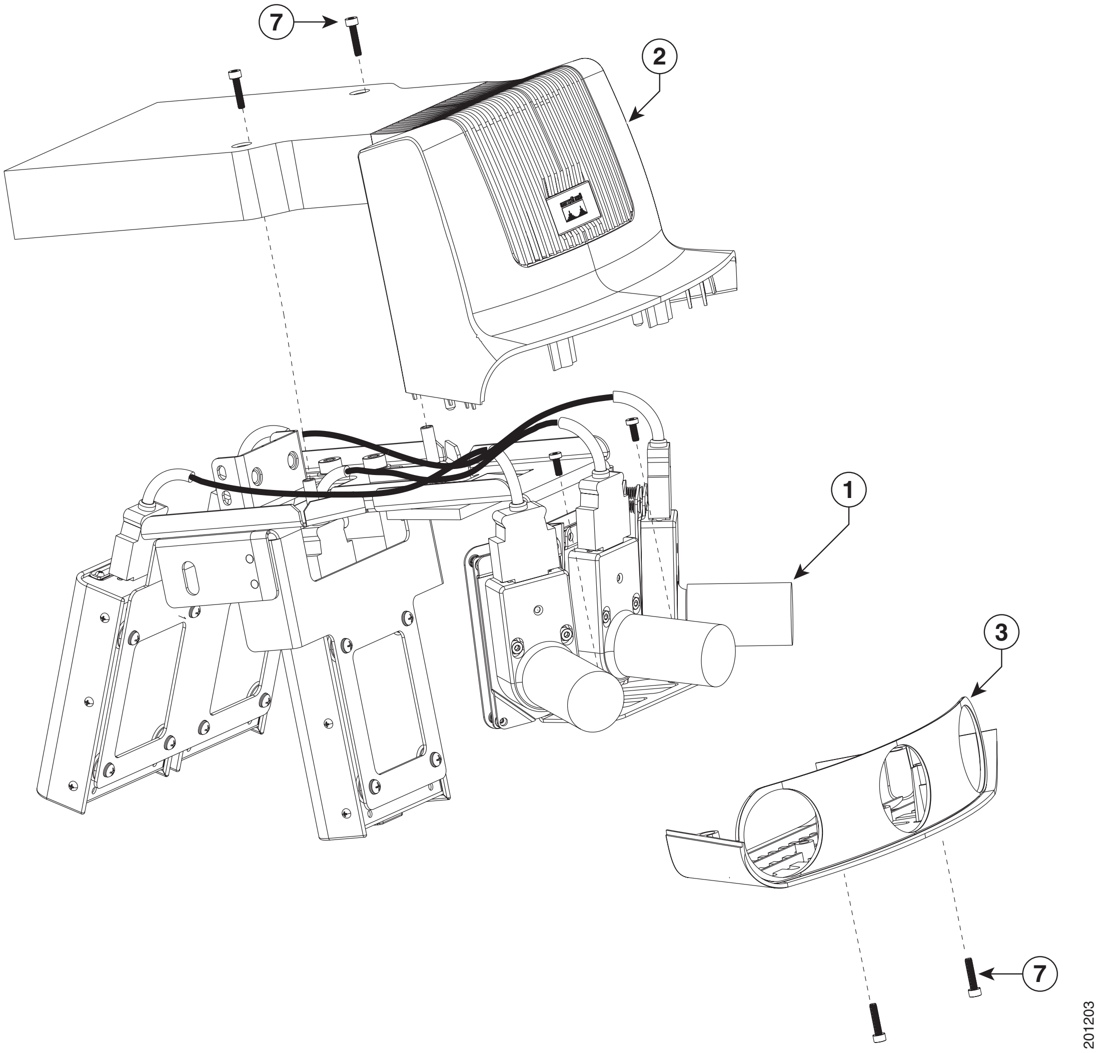
Attaching the Camera Hood Assembly

- After you complete the camera adjustment, attach the camera hood assembly. See Figure 9-7.

Note Attach the top hood before attaching the bottom hood.

Caution Do not overtighten the screws, or use a power screwdriver to tighten the screws. In addition, make sure that you use screws of the correct length (20 mm). Overtightening the screws, or using a screw that is too long, can cause the plastic hoods to break.

Figure 9-7 Attaching the Camera Hood Assembly



Troubleshooting Cameras

Use Table 9-2 to troubleshoot problems with cameras.

Table 9-2 Troubleshooting Chart for Camera Problems

Problem	Possible Cause	Action
Cisco TelePresence 3000/3200 only Camera image appears on the wrong display.	Cables are plugged into the wrong connector ports.	Check that the cables from each camera are plugged into the correct connector on its respective codec. Two connections are made for the camera, an RJ-45 cable plugs into the large connector and a video-to-DVI-I cable plugs into the small connector. Connect them as follows: • Plug the center camera into the primary codec. • Plug the participant's left camera into the left secondary codec. • Plug the participant's right camera into the right secondary codec.
Image not positioned correctly.	Camera is not aligned correctly.	Adjust and focus the camera using the targets.
Image colors are incorrect.	Video cable is only partially connected. Color settings are not correct.	Tug on the plug to see if it is fully plugged in. See separate documentation for the camera adjustment procedures.
No image.	Lens cap is in place. Camera is not plugged in or is plugged in incorrectly.	Remove the lens cap. Check power connections and switches on each display. Verify that the video and Ethernet cables from each camera are plugged into the correct connectors on their respective codecs.
No image.	Camera or display is broken.	Contact Cisco technical support if you are certain that the cabling is correct, power is applied, and a display and camera test has been run, but no image is seen on the display.

Setting Up the Speakers

The speakers are set up correctly you can hear sound clearly from each one. You can choose whether you want to cycle through the speakers automatically or manually.

- Click **Speakers** on the Hardware Setup window to select the speaker test.
- Click **Start** to begin the speaker setup.
- Click **Cycle Through Speakers** to have sound cycled automatically for 5 seconds on each speaker.
- Click **Manually Step Through Speakers** to test sound on each speaker. Click **Next Speaker** to progress to the next speaker.

Troubleshooting Speakers

Use Table 9-3 to troubleshoot problems with speakers.

Table 9-3 Troubleshooting Chart for Speaker Problems

Problem	Possible Cause	Possible Solution
No sound is heard.	Speaker cable is not connected or is only partially connected.	Check that the red and black pronged ends of the speaker cable are securely fastened under their corresponding connectors on the speaker. Check that the speaker cable is plugged into the correct receptor on the primary codec. Tug on the plug to see if it is fully plugged in. Press the plug in firmly until a click is heard.
Cisco TelePresence 3000/3200 only Sound heard at wrong speaker.	Speaker cable is not connected in the correct connector.	Check that the speaker cable is plugged into the correct receptor on the primary codec. Plug all speakers into the primary codec.
Sound is not synchronized with video.	—	Contact Cisco technical support.

Setting Up the Microphones

The microphones are set up correctly when each microphone registers sound. You must supply sound at each microphone to complete setup.

The Microphone Troubleshooting screen displays the number of microphones available for testing. For CTS-1000s, you see one screen with an audio meter displayed. For CTS-3000s, you see three screens, each with an audio meter displayed. For CTS-3200s, you will see three screens with either two of three microphones per screen, depending on the number of microphones installed. The top microphone represents the microphone in the front row; the bottom microphone icons represent the back row microphones.

- Click **Microphones** on the **Hardware Setup** window.
- Click **Start** to begin setup.
- Lightly tap each microphone and watch the audio meter on the corresponding display screen to see that sound registers.
- Click **Refresh Microphones Status** (CTS-3200s only) to update the on/off status of all microphones.
- Click **Stop** when setup is complete.

Troubleshooting Microphones

Use Table 9-4 to troubleshoot problems with microphones.

Table 9-4 Troubleshooting Chart for Microphone Problems

Problem	Possible Cause	Possible Solution
Sound is muffled.	Something near or on the microphone is distorting the sound.	Move objects away from the microphone.
Cisco TelePresence 3000/3200 only Sound registers at the wrong microphone.	Microphone cable is not connected to its corresponding codec.	Check that the cable from the microphone is plugged into the correct receptor on the codec. Plug all microphones into the primary codec.
No sound registers.	Microphone cable is not connected or is only partially connected.	Check that the system is plugged in and power is on. Check that the microphone plug is firmly seated in the correct connector on the primary codec. Check that the mute light on each microphone is lit. An unlit light indicates that the microphone is not plugged in. Lightly tap the microphone to see if sound registers. Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system, but no sound registers on the microphone.
Microphone icon with red pipe displays.	Microphone is not connected.	Check that the microphone is properly plugged in.
Microphone icon with question mark displays.	One of the microphones is unplugged.	Check that the microphone is properly plugged in.

Setting Up the Projector

This section contains the steps that you perform to set up the projector and includes the following sections:

- Standard CTS-3000 Projector Setup, page 9-15
- Projector Setup With an Auxiliary Control Unit, page 9-19

Standard CTS-3000 Projector Setup

To set up a projector with a standard CTS-3000 installation, complete the following steps:

Note The following procedures are specific to the Sanyo PLV-Z4 and PLV-Z5 projectors.

Step 1 Start a test pattern display for the projector by completing the following steps:

a. Open a browser that is connected to the network.

b. Enter the IP address of the primary codec to log in to Cisco TelePresence System Administration.

Note If you need to obtain the IP address, complete the following steps:

1. On the IP phone, locate Manual at the bottom of the screen and press the **Manual** soft key.

   Note If you cannot locate the Manual button, proceed to Step 2.

2. Locate Info at the bottom of the screen and press the **Info** soft key.
3. Scroll down to the **IP Address** listing and copy the address.

c. Log in to the system by entering the following information:

- Username: **admin** (case sensitive)
- Password: **cisco** (case sensitive)

d. Select **Troubleshooting > Hardware Setup**, then click the **Presentation Devices** radio button.

e. Select the **Test Pattern** radio button.

f. Click **Start** to begin the test.

Step 2 Turn on the projector by turning the projector power/rocker switch to the **ON** position.

The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.

Note The image is upside down and reversed since the projector is mounted upside down under the table.

If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.

Step 3 Set the display to display right-side up by completing the following steps:

- **a.** Press the **MENU** key on the remote control.

Note The menu screen will appear upside down and reversed. If the image is right-side up, continue to Step 4.

- **b.** Use the Up Arrow and Down Arrow keys and highlight **Setting**.
- **c.** Press the Right Arrow key and select **Setting** to enter the Setting submenu.
- **d.** Press the Up Arrow and Down Arrow keys and select **Advanced Menu**.
- **e.** Press the Right Arrow key and select **ON**.
- **f.** Press the Up Arrow and Down Arrow keys and highlight **Mounting**.
- **g.** Press the Right Arrow key and select **Mounting** to enter the Mounting submenu.
- **h.** Press the Up Arrow and Down Arrow keys and select **Ceiling**.
- **i.** Press the Left Arrow key and select **Ceiling**.

The image should now display right-side up.

Step 4 Set the background color by completing one of the following procedures:

- For PLV-Z4 projectors, perform the following procedure:
  - **a.** Press the Up Arrow and Down Arrow keys to highlight **Blue Back**.
  - **b.** Press the Right Arrow key and select **Blue Back** to enter the Blue Back submenu.
  - **c.** Press the Right Arrow key and select **Off**.
- For PLV-Z5 projectors, perform the following procedure:
  - **a.** Press the Up Arrow and Down Arrow keys and highlight **Background**.
  - **b.** Press the Right Arrow key and select **Background** to enter the Background submenu.
  - **c.** Press the Right Arrow key and select **Black**.

Step 5 Set the display by completing the following steps:

- **a.** Press the Up Arrow and Down Arrow keys and select **Display**.
- **b.** Press the Right Arrow key and select **Off**.

Step 6 Set the logo by completing the following steps:

- **a.** Press the Up Arrow and Down Arrow keys and select **Logo**.
- **b.** Press the Right Arrow key and select **Off**.

Step 7 Select the image mode by completing the following steps:

- **a.** Press the Up Arrow and Down Arrow keys and highlight **Image**.
- **b.** Press the Right Arrow key and select **Image** to enter the Image submenu.
- **c.** Press the Up Arrow and Down Arrow keys and highlight **Vivid**.
- **d.** Press the Right Arrow key and select **Vivid**.
- **e.** Press the Left Arrow key to confirm your selection.

Step 8 Select the screen size by completing the following steps:

- **a.** Press the Up Arrow and Down Arrow keys and highlight **Screen**.
- **b.** Press the Right Arrow key and select **Screen** to enter the Screen submenu.
- **c.** Press the Up Arrow and Down Arrow keys and highlight **Normal**.

d. Press the Right Arrow key and select **Normal**.

e. Press the Left Arrow key to confirm your selection.

Step 9 Eliminate overscan by completing the following steps:

a. Press the Up Arrow and Down Arrow keys and highlight **Picture adj**.

b. Press the Right Arrow key and select **Picture adj.** to enter the Picture Adjustment submenu.

c. Press the Right Arrow key and select **Overscan**.

d. Press the Left Arrow key and reduce the Overscan value to zero.

e. Press the **OK** key to complete the Overscan setting.

f. Press the Left Arrow key to confirm your selection.

Step 10 Set the lamp iris by completing the following steps:

a. Press the Up Arrow and Down Arrow keys and highlight **Image adj**.

b. Press the Right Arrow key and select **Image adj.** to enter the Image Adjustment submenu.

c. Press the Up Arrow and Down Arrow keys and highlight **Advanced menu**.

d. Press the Right Arrow key and select **Advanced menu**.

e. Press the Up Arrow and Down Arrow keys and highlight **Lamp iris**.

f. Press the Right Arrow key and select **Lamp iris**.

g. Press the Right Arrow key and select **Open**.

h. Press the **OK** key to complete the selection.

i. Press the Left Arrow key to confirm your selection.

j. Press the Up Arrow and Down Arrow keys and highlight **Store**.

k. Press the Right Arrow key and select **Store**.

The first of four icons should be highlighted.

l. Press the **OK** key.

An arrow should point to **Yes**.

m. Press the **OK** key.

The icons for an open door should be highlighted.

n. Press the **OK** key.

Store should be highlighted.

o. Press the Left Arrow key to complete the Image adj. function.

p. Press **Menu** to exit the menu.

Step 11 Set the lens iris by completing the following steps:

a. From the main menu, use the Up Arrow and Down Arrow keys to highlight the **Image Adj** function. Press the Right Arrow key to select the Image Adj sub-menu.

b. Use the up and Down Arrow keys to select **Lens Iris**.

c. Press the Right Arrow key to display the lens value setting tool. Press the Right Arrow until you reach 0, then press **OK** to return to the Image Adj submenu.

d. Press the Left Arrow key to return to the main menu.

Step 12 Select the screen size by completing the following steps:

- **a.** From the main menu, use the Up Arrow and Down Arrow keys to highlight the **Screen** function. Press the Right Arrow key to select the Screen sub-menu.
- **b.** Use the up and Down Arrow keys to select **Normal**, then press OK.
- **c.** Press the Left Arrow key to return to the main menu.

Step 13 Select the video source by completing one of the following procedures:

- **a.** Press the H1/H2 key on the remote control until **HDMI 1** appears on the screen.
- **b.** If the correct video image does not appear, use the Up Arrow and Down Arrow keys to select **Input**. Use the Right Arrow to select the **Input** sub-menu.
- **c.** Use the Up Arrow and down keys to select either **HDMI** (for the PLV-Z4 projector) or **HDMI 1**(for the PLV-Z5 projector).
- **d.** Press the Left Arrow key to exit the **Input** function.

Step 14 Set the group, number and data settings by completing the following steps:

Note Changing these settings allows a projector to be monitored by the System Network Management Protocol (SNMP) when the projector is in an inactive state. If a projector lamp fails, SNMP does not properly report the failure from an inactive projector until you complete these steps.

- **a.** Press the **Menu** key for 20 seconds.

  The letter S displays in the upper left corner of the screen.
- **b.** Press the **Screen** key for 3 seconds.

  The service menu displays.
- **c.** Press **OK** until the group number setting changes to **100**.
- **d.** Press the **Down Arrow** key until the No. setting changes to **4**.
- **e.** Press the **Left Arrow** key until the Data setting changes to **0**.
- **f.** Press the **ON-OFF** key to end the service menu.

Step 15 Aim the remote control at the lens of the projector.

Tip You can use the screen to reflect the signal back to the projector if you are sitting at the table.

Leave the projector in this state. When the video signal is turned off or disconnected, the projector will go black for 30 seconds. Then it will count down for 5 minutes and then turn off the lamp.

If a video signal is applied during this 5 minute countdown the video will reappear immediately. If the countdown completes, the projector goes into a cooldown mode which will ignore a video signal for 30 seconds. It will then stay in a standby mode and will power back up when a video signal is connected. It will take 15 seconds for the projector to light back up.

Step 16 To check either VGA or document camera input, perform the following steps:

- **a.** Click **Presentation Devices** on the **Hardware Setup** window.
- **b.** Perform one of the following steps to test the video input:
  - Click the **VGA** radio button to test input from a VGA device
  - Click the **Document camera** radio button to test input from the document camera

If the input image is displaying correctly, you should see an image projected on the projection surface.

Step 17 If the image is out of focus or is too small, use the projector focus ring to focus the image and use the zoom lever to create the largest possible image.

Step 18 Click **Stop** in Cisco TelePresence System Administration to remove the test pattern and complete the projector test.

Projector Setup With an Auxiliary Control Unit

If your system has an Auxiliary Control Unit, set up the projector for first-time use by completing the steps in this section.

Step 1 Make sure that a serial cable is connected from your projector to the Serial 1 output of the auxiliary control unit. See the "Options for the Cisco TelePresence System 3000" chapter of the *Cisco TelePresence Hardware Options and Upgrade Guide* for information about cabling your system with an Auxiliary Control Unit.

Step 2 Start a test pattern display for the projector by completing the following steps:

- **a.** Open a browser that is connected to the network.
- **b.** Enter the IP address of the primary codec to log in to Cisco TelePresence System Administration.
- **c.** Select **Troubleshooting > Hardware Setup**, then click the **Presentation Devices** radio button.
- **d.** Select the **Test Pattern** radio button.
- **e.** Click **Start** to begin the test.

Step 3 Turn on the projector by turning the projector power rocker switch to the **ON** position.

The projector takes approximately 15-30 seconds to warm up, and should be fully initialized within one minute. If the projector is not receiving video, the screen will be blue. If the projector does not receive video for five minutes and 30 seconds, the projector turns off.

If the test pattern is displaying correctly, you should see a grid projected on the projection surface. In the center of the grid, you should see a series of horizontal grey bars. You should also see a one-pixel wide green border around the outside of the grid.

Step 4 From Cisco TelePresence System Administration, click **Set Projector Defaults** to automatically configure the projector for use with the CTS-3000.

Step 5 Set the group, number and data settings by completing the following steps:

Note Changing these settings allows a projector to be monitored by SNMP when the projector is in an inactive state. If a projector lamp fails, SNMP does not properly report the failure from an inactive projector until you complete these steps.

Tip Use the projector remote control or press the buttons on the projector to complete these steps.

- **a.** Press the **Menu** key for 20 seconds.

  The letter S displays in the upper left corner of the screen.
- **b.** Press the **Screen** key for 3 seconds.

  The service menu displays.

- **c.** Press **OK** until the group number setting changes to **100**.
- **d.** Press the **Down Arrow** key until the No. setting changes to **4**.
- **e.** Press the **Left Arrow** key until the Data setting changes to **0**.
- **f.** Press the **ON-OFF** key to end the service menu.

Step 6 Center the projector display within the screen by completing the following steps:

- **a.** Locate the lock switch and two dials on the side of the projector.
- **b.** Move the switch to the unlock position.
- **c.** Rotate the vertical dial to position the top of the image 1 inch below the bottom of the wood surface.
- **d.** Rotate the horizontal dial to position the sides of the image 15 inches from each of the seams on the table segments.

  Completing this step should center the image in the screen. If the image is not centered, adjust the image until the distance is equal from each table segment seam.
- **e.** Move the switch to the lock position.

Step 7 Aim the remote control at the lens of the projector.

Tip You can use the screen to reflect the signal back to the projector if you are sitting at the table.

Leave the projector in this state. When the video signal is turned off or disconnected, the projector will go black for 30 seconds. Then it will count down for 5 minutes and then turn off the lamp.

If a video signal is applied during this 5 minute and 30 second countdown the video will reappear immediately. If the countdown completes, the projector goes into a cooldown mode which will ignore a video signal for 30 seconds. It will then stay in a standby mode and will power back up when a video signal is connected. It will take 15 seconds for the projector to light back up.

Step 8 To check either VGA or document camera input, perform the following steps:

- **a.** Click **Presentation Devices** on the **Hardware Setup** window.
- **b.** Perform one of the following steps to test the video input:
  - Click the **VGA** radio button to test input from a VGA device
  - Click the **Document camera** radio button to test input from the document camera

If the input image is displaying correctly, you should see an image projected on the projection surface.

Step 9 If the image is out of focus or is too small, use the projector focus ring to focus the image and use the zoom lever to create the largest possible image.

Step 10 Click **Stop** in Cisco TelePresence System Administration to remove the test pattern and complete the projector test.

Troubleshooting Presentation Devices

Use Table 9-5 to troubleshoot problems with presentation devices.

Table 9-5 Troubleshooting Chart for Presentation Device Problems

Problem	Possible Cause	Possible Solution
Test pattern is not displayed.	Projector power switch is off.	Check projector power switch. Switch the projector on/off rocker switch to the ON position.
Test pattern is not displayed.	Power cable is not connected.	Check to see if the LED on the top of the projector is illuminated; it can be either green or yellow. If the LED light is not illuminated, make sure that the power cable is plugged in.
Test pattern is not displayed.	Video cable connector is not connected to the projector or to the primary codec.	Check that the video cable connector is plugged into the projector and into the correct connector on the primary codec. Contact Cisco technical support if you are certain that the cabling is correct and power is applied to the system but no image is displayed.
Test pattern is not displayed.	Projector is set up to receive PC input instead of input from its video cable connector.	Use the projector remote control to configure the projector for HD video input. If your system includes an Auxiliary Control Unit, click **Set Projector Defaults**.
Test pattern is not displayed.	Object is blocking the path of the projector.	Remove any objects blocking the projector lens.
Test pattern is not displayed.	Video cable connector is not securely seated in the projector.	Seat the video cable connector securely.
Test pattern is not displayed.	Video cable connector is not securely seated in the primary codec.	Seat the video cable connector securely.
Test pattern is not displayed.	Video cable connector is not inserted in the correct port on the primary codec.	Check the cabling diagrams in Chapter 8, "Routing Power and Signal Cables"to identify the correct port into which to insert the video cable connector. The video cable connector should be connected to auxiliary video out.
Projector image is dim.	Lamp iris needs to be set to open.	Complete Step 10 in the "Standard CTS-3000 Projector Setup" section on page 9-15.

Note The Cisco TelePresence System can display information from multiple input devices during a meeting; if multiple input devices are sending information, the projector displays the input from the last presentation device sending information. If an input device image is not being seen on the projector screen, try the following: for VGA devices, unplug the device from the VGA cable, wait 5 seconds, and then plug the device back in; for document cameras: turn the camera off, wait 5 seconds, and then restart the device.

Other Devices

Use **Other Devices** to check the Auxiliary Control Unit, which controls the individual light units surrounding the displays in CTS conference rooms and enables the CTS to get more complete projector status information and to restores projector defaults.

- Click **Other Devices** on the Hardware Setup window.
- Click the **Start** radio button to access the Auxiliary Control Unit to begin testing. To end the test, click **Stop**.
  - Individual light units correspond to the five port numbers of the Auxiliary Control Unit. Click the appropriate box to select a specific port number; Click **Select All** to select all ports (and all light units) or **Select None**.
  - Click the **Refresh On/Off Status** button to update the on/off status of each port.
  - Click the **Turn Selected Lights On/Off** to test the selected light unit(s).
  - Click the **Reset Auxiliary Control Unit** to power cycle the Auxiliary Control Unit.

CHAPTER 10

Use & Care Guide

Revised: October 31, 2008, OL-14521-01

Maintaining the Tabletop

Caution Waxing or rubbing the surface with any type of abrasive is not recommended.

- **For general daily care** - use a dampened cloth with clean water.
- **To remove dirt** - use a mild soap and water solution. Wipe off with clean water afterward to remove the soap.
- **To remove ink marks** - rub the stained area with a pencil eraser.
- **To polish the tabletop** - use lemon oil.

Note Lemon oil is not recommended for daily use.

Cleaning the Plasma displays

Per industry-standard best practice recommendations for cleaning plasma displays:

The plasma displays require special consideration when cleaning. Wipe the panel surface gently using only a cleaning cloth or a soft, lint-free cloth. If the surface is particularly dirty, wipe with a soft, lint-free cloth which has been soaked in pure water or water to which a small amount of neutral detergent has been added, and then wipe it evenly with a dry cloth of the same type until the surface is dry.

Cleaning the Camera lens

Caution Do not touch the camera after installation is completed. If you need to clean the camera lens, use a dry microfiber cloth. After cleaning, you will need to realign the camera.

Maintaining the Projector

Note Refer to the Projector User Guide included with your projector for maintenance issues such as cleaning the projector lens. To replace the projector lamp, see the "Replacing the Projector Lamp—Part Number CTS-PRJTR-BL-GEN1" section on page 11-17.

Warning **Only trained and qualified personnel should be allowed to install, replace, or service this equipment.**

Warning **Installation of the equipment must comply with local and national electrical codes.**

CHAPTER 11

Field-Replaceable Unit Guide

Revised: October 31, 2008, OL-14521-01

This chapter describes the steps you perform to replace the field-replaceable units (FRUs) for the Cisco TelePresence system and includes the following sections:

- Replacing the Camera Cluster—Part Number CTS3K-CAM-CLST-G2, page 11-1
- Replacing a Plasma Display—Part Number CTS-DISP-65-GEN2, page 11-3
- Replacing a Speaker—Part Number CTS-LDSPKR, page 11-8
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Replacing the Camera Cluster—Part Number CTS3K-CAM-CLST-G2

Required Information, Tools, and Equipment

To remove and replace the camera cluster for the Cisco TelePresence 3000, you need the following information, tools, and equipment:

- The *Cisco TelePresence System Administrator's Guide* for your software release

- The *Release Notes for Cisco TelePresence System* for your software release
- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches
- 0.9mm Allen wrench for camera lens adjustments (if the lens uses a thumbscrew, no tools are required)
- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- Masking tape
- Laptop computer attached to network

Powering Off the System

Power off the system by turning the power switches to the Off position on the two left PDUs, single right PDU and, if present, the PDU or auxiliary control unit behind the center display assembly.

Caution Make sure all system power is turned off before beginning this disassembly.

Removing the Camera Cluster

Note Make sure to retain all screws, brackets, and other parts during the disassembly.

Caution Take care not to scratch or mar the display screen during the replacement procedure.

Note The directions *left* and *right* refer to the assembly as you face it.

Step 1 Remove the top camera hood by removing the screws that secure it to the bracket.

Step 2 Remove the lens hood by removing the two screws on the bottom of the hood.

Step 3 At the back of the camera cluster, disconnect the six cables: one Ethernet and one signal cable from each of the three camera processors. As you remove each cable, attach a strip of temporary masking tape and mark as “left,” “right,” or “center” for identification.

Tip To enable easier access to the loose cables, temporarily attach them to the upper back of the display with masking tape.

Step 4 Remove the camera assembly by removing the screws from the top and side flanges of the camera assembly support bracket. Retain the screws and set the assembly aside.

Step 5 Attach the new camera assembly to the mounting bracket using the same M8 screws that were removed.

See Chapter 7, “Assembling the Remaining Cisco TelePresence Elements,” for more information.

Step 6 Reattach the Ethernet and signal cables according to your temporary markings.
Do not attach the camera hoods at this time.

Step 7 Open a browser on a computer connected to the network.

Step 8 Type in the IP address of the center, primary codec unit. Enter the required information at the login screen.

Step 9 The Cisco TelePresence Administrator window appears. Verify the status of the Cisco Unified Communication Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 10 Select **Hardware Setup** to verify the cameras, displays, speakers, and microphones are working properly.

Step 11 Perform the camera adjustment procedure.

See the "Setting Up the Cameras" section on page 9-7 for more information.

Step 12 Re-attach the camera hood and lens hood.

Caution Do not overtighten the screws, or use a power screwdriver to tighten the screws. In addition, make sure that you use screws of the correct length (20 mm). Overtightening the screws, or using a screw that is too long, can cause the plastic hoods to break.

Step 13 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Replacing a Plasma Display—Part Number CTS-DISP-65-GEN2

Required Information, Tools, and Equipment

To disassemble and reassemble portions of the Cisco TelePresence 3000 to replace a display, you need the following information, tools, and equipment:

- *Release Notes for Cisco TelePresence System, Release 1.4*, OL-12074-05
- *Cisco TelePresence System Release 1.4 Administrator's Guide*, OL-13676-03

Uncrating and unpacking:

- Claw hammer or small pry bar
- Large Phillips screwdriver
- * Tin snips
- * Pallet jack or hand cart (for moving components)
- * Safety gloves
- * Safety glasses
- * Box cutters

Cisco TelePresence 3000 Structure, Accessory, and Adjustment Assembly:

- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches

Tip A round-head Allen bit allows the bit to work at an angle instead of only straight out, which is helpful in tight spots.

- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- 9/64-inch Allen wrench (supplied with speakers)
- 0.9mm Allen wrench for camera lens adjustments (if the lens uses a thumbscrew no tools are required)
- Level
- Masking tape
- * Tie wraps
- Laptop computer attached to network
- * Step ladder

* Recommended for best results

Powering Off the System

Power off the system by turning the power switches to the Off position on the two left PDUs, single right PDU and, if present, the PDU or auxiliary control unit behind the center display assembly.

Caution Make sure all system power is turned off before beginning this disassembly.

Removing Audio Components

Caution Take care not to mar or introduce smudges or dirt to the surface of the projector screen.

Step 14 Remove the Projector screen by performing one of the following actions:

- If your projector screen is slightly recessed and uses black side trims, complete the following steps:
  - **a.** Remove the side trims from the edges of the display.

    Be careful not to mar the screen when you perform this step.
  - **b.** Use an open-ended wrench to loosen the feet on the bottom of the screen, and lower the screen.
  - **c.** After you have created a gap of approximately 1/2 inch (1 centimeter) between the screen and the display shelf, detach the holes on the top screen from the locating pins on the underside of the display shelves and remove the screen.

- If your projector screen does not have side trims and is flush with the display cabinet, grasp the outer edges of the screen and pull it up and away from the Projector clips that hold the screen to the Display shelves.

Step 15 Disconnect the Speaker cables from the Speaker terminals.

Step 16 Loosen the half-turn bolts on either side of the left Speaker board. Slip the Speaker board over the half-turn bolts and remove it from the work area.

Step 17 If you are replacing the center or right Plasma display, remove the center speaker board by repeating Step 15 and Step 16.

Step 18 If you are replacing the center Plasma display, proceed to the next section, "Removing the Camera Cluster".

Step 19 If you are replacing the right Plasma display, remove the right speaker board by repeating Step 15 and Step 16.

Step 20 If you are replacing the right Plasma display, skip to the "Removing the Left Tabletop Door Section" section on page 11-5.

Removing the Camera Cluster

If you are replacing the center Plasma display, you must remove the camera cluster. Refer to the previous section, Removing the Camera Cluster for this procedure.

Removing the Left Tabletop Door Section

The left tabletop door section must be removed to allow room to move the Plasma displays in and out of the work area.

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Step 1 Remove the safety straps from the underside of the left tabletop section.

Step 2 Unscrew one side of the hinges connecting the left tabletop door section to the left Table segment.

Step 3 Remove the left tabletop door section and set it aside.

Removing a Display Shelf

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Step 1 Unscrew the left Accessory cabinet from the left Accessory cabinet attachment bracket. Remove the Accessory cabinet from the work area.

Step 2 From the underside of the left Display shelf, unscrew one side of each metal plate connector.

Step 3 Loosen each cam lock coupling.

Step 4 Unscrew the left Display shelf from the two Display Shelf support brackets.

Step 5 Pull the left Display shelf away from the center Display shelf and set aside.

Step 6 If you are replacing the left Plasma display, skip to the next section, "Removing the Display Screen and Completing the Procedure".

Step 7 If you are replacing the center or right Plasma display, repeat Step 2 through Step 5 for the center display shelf section.

Step 8 If you are replacing the center Plasma display, skip to the next section, "Removing the Display Screen and Completing the Procedure".

Step 9 If you are replacing the right Plasma display, unscrew the right Accessory cabinet from the right Accessory cabinet.

Step 10 Place the Accessory cabinet under the right Tabletop wing segment to support it.

Step 11 Unscrew the right Tabletop wing segment from the Accessory cabinet attachment bracket.

Step 12 Unscrew the right Display shelf from the two Display Shelf support brackets. Set aside the Display shelf.

Removing the Display Screen and Completing the Procedure

Step 1 Detach the display screen's signal cable from the correct codec unit.

See Chapter 8, "Routing Power and Signal Cables", for cable locations and reference.

Step 2 Detach the display screen's power cable from the correct PDU.

See Chapter 8, "Routing Power and Signal Cables", for cable locations and reference.

Step 3 Remove the black tape from the seam behind and between the display screens.

Step 4 Remove the left and right Display tilt brackets from the Display shelf supports.

Step 5 Using a minimum of two people, lift the Plasma display straight up to disengage the hooks on the back of the display from the horizontal mounting rod on the Display structure.

Step 6 Move the Plasma display out of the work area to a temporary location safe from potential damage.

Step 7 Unpack the new display.

Note Take care to minimize damaging the packaging material so it may be reused to package the old display screen.

Step 8 Turn the power switch on the Plasma display to the On position and make sure the cables are unbundled and hanging freely. Once the display is hung, these items may not be accessible.

Step 9 Hang the replacement Plasma display.

Step 10 Plug in the signal cable to the correct codec.

See Chapter 8, "Routing Power and Signal Cables".

Step 11 Plug in the power cable to the correct PDU.

See Chapter 8, "Routing Power and Signal Cables".

Step 12 Align and level the display and add the black seam tape.

See Chapter 3, "Mounting and Leveling the Plasma Displays".

Step 13 If required, attach the camera cluster.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" and Chapter 8, "Routing Power and Signal Cables".

Step 14 Reassemble the display shelf sections.

See Chapter 5, "Building the Display Shelf Assembly".

Step 15 Hang the speaker boards.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for more information.

Step 16 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Step 17 Open a browser on a computer connected to the network.

Step 18 Type in the IP address of the center Primary codec. Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 19 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 20 Select **Hardware Setup** to verify the cameras, displays, speakers, and microphones are working properly.

Refer to the *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Step 21 Reattach the projector screen.

Tip The projector screen comes with printed instructions that should assist you with replacing it. If you cannot find the instructions, reverse the order of removal to install it.

Step 22 Reassemble the left door tabletop section.

See Chapter 5, "Building the Display Shelf Assembly" for more information.

Step 23 Perform the camera adjustment procedure.

Refer to *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Step 24 Attach the camera hood and lens hood.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for more information.

Step 25 Perform the display first-time setup procedure.

See Chapter 9, "Setting Up the Displays" for more information.

Step 26 If required, perform first-time camera setup procedures.

See Chapter 9, "Setting Up the Cameras" for more information.

Step 27 Repackage the old display using the new display box and packing materials.

Replacing a Speaker—Part Number CTS-LDSPKR

Required Information, Tools, and Equipment

To remove and replace a speaker for the Cisco TelePresence 3000, you need the following information, tools, and equipment:

- The *Cisco TelePresence System Administrator's Guide* for your software release
- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches

Tip A round-head Allen bit allows the bit to work at an angle instead of only straight out, which is helpful in tight spots.

- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- 9/64-inch Allen wrench (supplied with speakers)
- Laptop computer attached to network (for troubleshooting or reference)

Powering Off the System

Power off the system by turning the power switches to the Off position on the two left PDUs, single right PDU and, if present, the PDU or auxiliary control unit behind the center display assembly.

Caution Make sure all system power is turned off before beginning this disassembly.

Removing and Replacing a Speaker

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Caution Take care not to mar the surface nor introduce smudges or dirt to the surface of the projector screen.

Step 1 Remove the Projector screen by performing one of the following actions:

- If your projector screen is slightly recessed and uses black side trims, complete the following steps:
  - **a.** Remove the side trims from the edges of the display.

    Be careful not to mar the screen when you perform this step.
  - **b.** Use an open-ended wrench to loosen the feet on the bottom of the screen, and lower the screen.

    c. After you have created a gap of approximately 1/2 inch (1 centimeter) between the screen and the display shelf, detach the holes on the top screen from the locating pins on the underside of the display shelves and remove the screen.

- If your projector screen does not have side trims and is flush with the display cabinet, grasp the outer edges of the screen and pull it up and away from the Projector clips that hold the screen to the Display shelves.

Step 2 Disconnect the Speaker cable clips from the Speaker terminals.

Step 3 Remove the magnetically-held face plate cover from the speaker. You can pry the cover off by carefully inserting the tip of a small screwdriver blade under the edge.

Step 4 Loosen the corner screws on the speaker with a 9/64-inch Allen wrench. The white fasteners on the rear side of the Speaker board should end up in a horizontal, releasing position.

Step 5 Pull the speaker out and set it aside.

Step 6 Insert the replacement speaker and secure it in place.

Step 7 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Step 8 Connect the Speaker cable clips from the Speaker terminals.

Step 9 Open a browser on a computer connected to the network.

Step 10 Type in the IP address of the Primary codec. Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 11 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 12 Select **Hardware Setup** to verify the cameras, displays, speakers, and microphones are working properly.

Refer to the *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Step 13 Reattach the projector screen.

Tip The projector screen comes with printed instructions that should assist you with replacing it. If you cannot find the instructions, reverse the order of removal to install it.

Step 14 Perform the speaker test. See Chapter 9, "Setting Up the Speakers" for more information.

Replacing a Codec Unit—Part Number CTS-CODEC-PRI-G2 (Primary Codec) or CTS-CODEC-SEC (Secondary Codec)

Required Information, Tools, and Equipment

To remove and replace a codec unit for the Cisco TelePresence 3000, you need the following information, tools, and equipment:

- The *Cisco TelePresence System Administrator's Guide* for your software release
- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches

Tip A round-head Allen bit allows the bit to work at an angle instead of only straight out, which is helpful in tight spots.

- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- Masking tape
- Laptop computer attached to the network

Powering Off the System

Power off the system by turning the power switches to the Off position on the two left PDUs, single right PDU and, if present, the PDU or auxiliary control unit behind the center display assembly.

Caution Make sure all system power is turned off before beginning this disassembly.

Removing and Replacing a Codec

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Step 1 From the back of the Cisco TelePresence 3000, access the codec to be removed. Turn the power switch on the codec to the Off position.

Step 2 Remove all cable ties holding the cables to the cable management bar. Take note of the organization of the cables.

Step 3 Remove the cables from the codec. Label each cable with masking tape for identification as it is removed.

See Chapter 8, "Routing Power and Signal Cables" for additional information.

Step 4 Remove and retain the screws that attach the codec's L-brackets to the Display structure Front feet.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for additional information.

Step 5 Remove the codec from the Display structure.

Step 6 Remove the L brackets from the codec.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for additional information.

Step 7 Remove the cable management bar from the codec. Retain the bar and the screws.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for additional information.

Step 8 Attach the L-brackets and Cable management bar to the replacement codec.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for additional information.

Step 9 Attach the codec to the display structure front feet using the screws that you removed in Step 4.

Step 10 Turn the codec power switch to the On position.

Caution Make sure each PDU power switch is still in the Off position.

Step 11 Reattach the cables according to your temporary masking tape identification.

See Chapter 8, "Routing Power and Signal Cables", for additional information.

Step 12 Attach the cables to the cable management bar using tie wraps.

Step 13 If the replacement unit was the Primary codec, follow these steps.

- **a.** Open a browser on a computer connected to the network.
- **b.** Access the Cisco Unified Communications Manager interface.
- **c.** Change the MAC address for the Primary codec to its new address.

Step 14 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Step 15 In the browser on the computer, type in the IP address of the primary codec unit.

Step 16 Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 17 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 18 Select **Hardware Setup** to verify the cameras, displays, speakers, and microphones are working properly.

Step 19 Perform the **Auto Adjust** camera setup procedure. This sets the white balance to the correct levels. See the "Setting Up the Cameras" section on page 9-7 for detailed instructions.

Note If you are replacing the primary codec, power it on and complete all steps before powering on the secondary codecs. This prevents the secondary codecs from being affected by any software and peripheral upgrades to the primary codec.

Replacing a Microphone—Part Number CTS-MIC

Required Information, Tools, and Equipment

To remove and replace a microphone for the Cisco TelePresence 3000, you need the following information, tools, and equipment:

- The *Cisco TelePresence System Administrator's Guide* for your software release
- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches

Tip A round-head Allen bit allows the bit to work at an angle instead of only straight out, which is helpful in tight spots.

- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- Masking tape
- Laptop computer attached to the network

Powering Off the System

Power off the system by turning the power switches to the Off position on the two left PDUs, single right PDU and, if present, the PDU or auxiliary control unit behind the center display assembly.

Caution Make sure all system power is turned off before beginning this disassembly.

Removing and Replacing a Microphone

Note Make sure to retain all screws, brackets, and other parts during the disassembly.

Step 1 From the back of the Cisco TelePresence 3000, access the Primary (center) codec.

Step 2 Detach the specific microphone cable from the Primary codec. Note the location for later reference. Choose the appropriate microphone icon according to the following conventions:

- A single dot on a green background indicates a center microphone.
- Two dots on a white background indicate a left microphone.
- Three dots on a red background indicate a right microphone.

Step 3 Remove the microphone cable by pulling it to the right through the various cable management systems. Take note of how the cable is routed.

See Chapter 8, “Routing Power and Signal Cables,” for additional information.

Step 4 If you are replacing the left or right microphones, skip to Step 6.

Step 5 If you are replacing the center microphone, follow these steps.

- **a.** Loosen, but don't remove, the mounting screws holding the projector assembly to the underside of the center tabletop.
- **b.** Remove the projector assembly by sliding the unit to the left and away from the mounting screws.
- **c.** Alternately, if the fit is too tight to remove in this manner, remove the mounting screws from the tabletop. Ensure the projector assembly is secured while removing the screws.

See *Chapter 7, Assembling the Remaining Cisco TelePresence Elements* for more information.

Step 6 From the underside of the tabletop, remove the two screws securing the microphone. Retain the screws.

Step 7 Pull the cable out through the hole and set the microphone aside.

Step 8 Pull the replacement microphone cable through the hole in the tabletop.

Step 9 From the underside of the tabletop, attach the microphone by screwing in the two screws.

Step 10 Run the microphone cable to the codec in a similar manner as the original cable and attach it to the appropriate connection on the codec.

Step 11 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Step 12 Open a browser on a computer connected to the network.

Step 13 Type in the IP address of the Primary codec. Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 14 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 15 Select **Hardware Setup** to verify the cameras, displays, speakers, and microphones are working properly.

Refer to the *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Step 16 If required, reattach the projector assembly.

See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for more information.

Step 17 Perform the microphone test to verify that the microphone is working properly.

See the "Setting Up the Microphones" section on page 9-13 for more information.

Replacing a Light Fixture—Part Number CTS-LIGHT-FIXT

Required Information, Tools, and Equipment

To disassemble and reassemble portions of the Cisco TelePresence 3000, you need the following information, tools, and equipment:

- *Cisco TelePresence System Release 1.4 Administrator's Guide*, OL-13676-03
- Power screwdriver with 2.5, 3, and 6 mm (standard or round) Allen bits, or standard 2.5, 3, and 6 mm Allen wrenches

Tip A round-head Allen bit allows the bit to work at an angle instead of only straight out, which is helpful in tight spots.

- Manual screwdrivers, Phillips and flat head types
- Metric wrenches, 10 to 15 mm
- Masking tape
- Step stool or small step ladder
- Laptop computer attached to network (for troubleshooting or reference)

Replacement Bulbs

A Field Replacement Unit consisting of three 5-foot and two 4-foot 4100 K bulbs is available from Cisco Customer Service. The part number is CTS-3000-BULBS.

If one or more bulbs need replacement, it is recommended that all five bulbs are replaced for lighting uniformity.

Note The light fixtures installed during assembly have a 4100 K rating. If you set the Plasma display to another value you need to purchase and replace the light fixtures to match the new color temperature setting.

Replacing a Light Fixture

Step 1 Power off the lights by turning the power switch to the Off position to the power unit that controls your lights.

Note Depending on your installation, your lights could be controlled by either a PDU or an Auxiliary Control Unit. See the "Routing Power and Signal Cables" section on page 8-1 for the for the location of he PDU. The Auxiliary Control Unit is located behind the center display structure.

Step 2 Unplug the light fixture from the PDU or Auxiliary Control Unit.

Step 3 For the right and left vertical light fixtures, follow these steps.

- **a.** Remove the screws from the light fixture holding bracket. The bracket is located in the middle of the fixture. Retain the screws.
- **b.** Lift the light fixture up and out of the lower cup bracket.

Step 4 For the horizontal light fixtures, follow these steps.

- **a.** Using the step stool or a small step ladder, reach over the display and remove the two screws from the light fixture holding bracket. The bracket is located in the middle of the fixture.
- **b.** Lift the light fixture up and out, being careful the cable does not mar the surface of the display.

Step 5 Place the replacement light fixture in the bracket and secure with the screws.

See Chapter 4, “Building the Lighting Assembly” for more information.

Step 6 Plug the light fixture into the PDU or Auxiliary Control Unit.

Step 7 Turn the power switch on the PDU or Auxiliary Control Unit to the On position.

Replacing the Audio/Video Extension Unit—Part Number CTS-AV-EXP

To remove and replace the audio/video extension unit for the Cisco TelePresence 3000, you need the following tools and equipment:

- Medium Phillips head screwdriver (for attaching the unit to its bracket)
- Large Phillips head screwdriver (for attaching the unit and bracket to the display structure)
- Masking tape

Remove and replace the audio/video extension unit by performing the following procedure:

Step 1 Power off the system by completing turning off the following units:

- The two left PDUs on the left accessory cabinet
- The single right PDU on the right accessory cabinet
- The auxiliary control unit on the center display structure

⚠ **Caution** Make sure all system power is turned off before beginning this disassembly.

Step 2 Remove the cables from the audio/video extension unit. Label each cable with masking tape for identification as it is removed.

See Chapter 8, “Routing Power and Signal Cables” for additional information.

Step 3 Use the screwdriver to remove the two screws that attach the extension unit and remove the unit from the display structure.

Step 4 Attach the new audio/video extension unit to its bracket, then attach the unit and bracket to the display structure. See Figure 7-15 and Figure 7-16 for more information.

Step 5 Attach the cables to the new extension unit using the masking tape labels as a guide.

Step 6 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Step 7 Test the microphone by performing the procedures in the "Setting Up the Microphones" section on page 9-13.

Replacing the Cisco IP Phone—Part Number CP-7975G-CTS

Step 1 Open a browser on a computer connected to the network.

Step 2 Type in the IP address of the Cisco Unified Communications Manager. Enter the required information at the login screen.

Step 3 Go to Device>Phone and find the phone you are replacing.

Step 4 In the Cisco Unified Communications Manager interface, enter the new MAC address for the replacement IP phone and press **Save**.

Step 5 Unplug the Ethernet cable from the back of the current Cisco IP phone and set the phone aside.

Step 6 Plug the Ethernet cable into the new IP phone and place it in the same location on the tabletop as the old phone.

Cisco Unified Communications Manager may download a new version of the phone software.

When the phone has completed its booting and upgrade, perform a reset on the Cisco TelePresence System from the Cisco Unified Communications Manager device page.

Step 7 If the new IP phone has not displayed a ready screen within five minutes, refer to the following documentation for more information:

- The *Cisco TelePresence System Administrator's Guide* for your software release
- The *Cisco Unified Communications Manager Installation Guide for the Cisco TelePresence System* for your software release.

Replacing the Projector Lamp—Part Number CTS-PRJTR-BL-GEN1

A likely cause of a malfunctioning projector is a burnt-out projector lamp. The life of the light bulb is approximately 2000 hours. Cisco does not stock this lamp but you can order it from a variety of outside vendors. The Sanyo part number is POA-LMP94.

Step 1 Power off the projector by turning off the power switch on the back of the unit.

Step 2 Allow the project to cool down for at least 45 minutes, or wear heat-resistant gloves during the replacement process.

Step 3 Unplug the HD Video cable, power cable, and serial cable from the rear of the unit.

Step 4 Remove the privacy panel.

Step 5 Note how the bracket attaches to the underside of the tabletop and perform one of the following actions:

- If the bracket attaches to the tabletop using screws and keyhole slots in the projector bracket, complete the following steps to remove it from the tabletop and continue to Step 6:
  - **a.** Remove two of the six screws that hold the projector assembly to the underside of the center tabletop. These screws are the rear-most of the six screws and the furthest away from the projector lens.
  - **b.** Loosen the remaining four mounting screws.

Note You might have to remove the screws and remove the assembly during this step, rather than loosen the screws. Be sure to secure the projector when you remove the screws.

   c. Remove the projector assembly by sliding the unit to the side until the projector mounting bracket disengages from the loosened mounting screws.

- If the bracket attaches to the tabletop with screws that hold the bracket by its edges, complete the following steps to remove it from the tabletop:
   a. Loosen the six screws that attach the projector assembly to the tabletop.
   b. Remove the projector assembly by sliding the unit to the front until the projector mounting bracket disengages from the loosened mounting screws.

Step 6 Loosen the screw that secures the lamp cover, then open the lamp cover. Access the cover through the cut-out rectangle on the projector mounting bracket.

Step 7 Use the screwdriver to loosen the two screws that secure the lamp fixture in place.

Step 8 Use the handles to remove the lamp module.

Note You may need to rock the unit backward and forward to unseat it.

Step 9 Install the replacement lamp module and secure the module and cover with the screws.

Step 10 Place the projector and bracket in position on the bottom of the table and slide the assembly into place.

Step 11 Tighten the screws that secure the mounting bracket and replace the two screws at the rear of the bracket.

Step 12 Reattach the power, video, and signal cables.

Step 13 Turn the power switch on the underside of the projector to the ON position.

Step 14 Reset the lamp replacement counter by completing the following steps:

a. Press the MENU button to display the on-screen menu.

Note You can either use the remote or press the button on the projector to perform these steps. The MENU and other buttons are on the underside of the projector after you attach it to the table.

b. Use the Up and Down arrow keys to select **Setting**.

c. Use the Right and Left arrow keys to select **Lamp counter reset**.

d. When you are prompted to reset the lamp counter, Select **Yes** and press the **OK** button.

e. Select **Yes** and press the **OK** button to reconfirm your choice.

Replacing the Projector—Part Number CTS-PRJTR-GEN1

Step 1 Power off the projector by turning off the power switch located on the back of the unit.

Step 2 Unplug the VGA cable from the back of the unit.

Step 3 Unplug the power cable from the back of the unit.

Step 4 Remove two of the six screws that hold the projector assembly to the underside of the center tabletop. These screws are the rear-most of the six screws and the furthest away from the projector lens.

Step 5 Loosen the remaining four mounting screws.

Note You might have to remove the screws and remove the assembly during this step, rather than loosen the screws. Be sure to secure the projector when you remove the screws.

Step 6 Remove the projector assembly by sliding the unit to the side until the projector mounting bracket disengages from the loosened mounting screws.

Note On some CTS-3000 models, you remove the projector assembly by sliding it to the front, rather than the side.

Step 7 Remove the screws that attach the mounting plate to the projector and remove the plate.

Step 8 Attach the mounting plate to the replacement projector.

Step 9 Reattach the assembly to the underside of the tabletop.

Step 10 Reattach the VGA cable to the projector.

Step 11 Reattach the power cable to the projector.

Step 12 If your system uses an auxiliary control unit, reattach the serial cable to the auxiliary control unit.

Step 13 Perform the first-time setup procedure for the projector.

See the "Setting Up the Projector" section on page 9-15 for more information.

Note Follow the procedure that is specific to your system configuration. The procedure to follow depends on whether your system uses an auxiliary control unit.

Replacing a PDU—Part Number CTS-PWR-PDU

There are two PDUs attached to the left accessory cabinet, one attached to the right accessory cabinet, one PDU attached to the underside of the tabletop, and one attached to the center display structure.

Step 1 On the PDU to be replaced, turn the power switch to Off and remove the plug from the wall receptacle.

Step 2 Remove any cables plugged into the PDU.

Step 3 Remove the PDU from the accessory cabinet or center Privacy panel by removing the mounting screws.

Step 4 Attach the replacement PDU.

Step 5 Plug in the jumper cords that were removed and turn the power switch to the On position.

Step 6 Plug the PDU power cord into the wall receptacle.

Step 7 Open a browser on a computer connected to the network.

Step 8 Type in the IP address of the center, primary codec unit. Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 9 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 10 Choose **System Restart** to perform a software reset.

Refer to the *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Replacing the Auxiliary Control Unit—Part Number CTS-LIGHT-CTRL

The auxiliary control unit is located in the center of the display assembly. For more information about the auxiliary control unit, refer to the "Options for the Cisco TelePresence System 3000" chapter of the *Cisco TelePresence Hardware Options and Upgrade Guide*.

Step 1 Turn the power switch on the auxiliary control unit to Off and remove the plug from the wall receptacle.

See Figure 7-21 for the location of the auxiliary control unit.

Step 2 Mark each microphone, power, and auxiliary control unit audio cable with its location on the auxiliary control unit.

Tip Use masking tape and a marker to mark the cables.

Step 3 Remove the auxiliary control unit from the rear of the display assembly.

Step 4 Attach the replacement auxiliary control unit.

Step 5 Plug in the cords that were removed and turn the power switch to the On position.

Step 6 Plug the power cord into the wall receptacle.

Step 7 Open a browser on a computer connected to the network.

Step 8 Type in the IP address of the center, primary codec unit. Enter the required information at the login screen. The Cisco TelePresence Administrator window appears.

Step 9 Verify the status of the Cisco Unified Communications Manager (seen in the lower left portion of the window) is **Enabled/Up**.

Step 10 Choose **System Restart** to perform a software reset.

Refer to the *Cisco TelePresence System Administrator's Guide* for your software release for more information.

Replacing a Display Shelf

The display shelves are the table sections that sit directly below the display screens.

Required Information, Tools, and Equipment

To remove and replace a display shelf, you need the following tools:

- Medium and large Phillips screwdriver
- 10 mm wrench

Tip A 10 mm open end ratcheting wrench is useful to loosen and tighten the draw bolts.

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Removing and Replacing a Display Shelf Row Table Section

Step 1 Power off the system by completing turning off the following units:

- The two left PDUs on the left accessory cabinet
- The single right PDU on the right accessory cabinet
- The auxiliary control unit on the center display structure

Caution Make sure all system power is turned off before beginning this disassembly.

Step 2 Open the table door.

Step 3 Remove the Projector screen by performing one of the following actions:

- If your projector screen is slightly recessed and uses black side trims, complete the following steps:
  - **a.** Remove the side trims from the edges of the display.

    Be careful not to mar the screen when you perform this step.
  - **b.** Use an open-ended wrench to loosen the feet on the bottom of the screen, and lower the screen.
  - **c.** After you have created a gap of approximately 1/2 inch (1 centimeter) between the screen and the display shelf, detach the holes on the top screen from the locating pins on the underside of the display shelves and remove the screen.
- If your projector screen does not have side trims and is flush with the display cabinet, grasp the outer edges of the screen and pull it up and away from the Projector clips that hold the screen to the Display shelves.

Step 4 Disconnect the speaker cables from the speaker terminals.

Step 5 Loosen the half-turn bolts on either side of the speaker boards.

Step 6 Slip the speaker boards over the half-turn bolts and remove them from the work area.

Step 7 From the underside of the display structure, remove all the screws that attach the display shelves to the display assembly.

Note The Display shelves are attached individually to the display structures as illustrated in Figure 5-3, Figure 5-4, and Figure 5-5.

Step 8 Loosen the draw bolts and remove the connecting plates that attach the display shelf to be replaced to its adjoining shelf or shelves.

Note See Figure 5-2 for the draw bolt and plate locations.

Step 9 Slightly separate the shelf to be replaced from the other shelves.

Caution Make sure that all remaining shelves stay on the display structure and do not fall between the structure supports.

Tip Slide the shelves to the left; there is space on the left that is created by the open table door.

Step 10 Remove the splines from the slot at both edges of the shelf to be replaced.

Step 11 Place the new shelf on the display assembly.

Step 12 Place the splines in the slots at the edges of the new shelf.

Step 13 Press the shelves together.

Step 14 Attach the new shelf to its adjoining shelf or shelves using the splines.

Step 15 From the underside of the display structure, insert the draw bolts and tighten them; then, attach the connecting plate between the new shelf and its adjoining shelf or shelves.

Step 16 Attach the screws that connect the display shelves to the display assembly.

Step 17 Reattach the speaker boards and speaker cables. See Chapter 7, "Assembling the Remaining Cisco TelePresence Elements" for detailed instructions.

Step 18 Reattach the projector screen.

Tip The projector screen comes with printed instructions that should assist you with replacing it. If you cannot find the instructions, reverse the order of removal to install it.

Step 19 Power on the system by turning the power switches to the On position on the two left PDUs, single right PDU, and (if present) auxiliary control unit or PDU on the rear center of the display assembly.

Replacing a Table Top Section

Complete these steps to replace a table top section.

Required Information, Tools, and Equipment

To remove and replace a table top section, you need the following tools:

- Medium and large Phillips screwdriver
- 10 mm wrench

Tip A 10 mm open end ratcheting wrench is useful to loosen and tighten the draw bolts.

Note Make sure to retain all screws, connectors, and other parts during the disassembly.

Removing and Replacing a Table Top Section

Step 1 Open the table door.

Step 2 Perform the following actions for specific table top sections:

- If you are replacing the table door or the left-center table top section, remove the table door. See Figure 11 for an exploded diagram of the parts for the door.
- If you are replacing the center table top section, remove the projector. See Figure 7-6 for an exploded diagram of the projector assembly.

Step 3 Detach the microphone from the table top section to be replaced. See Figure 7-2 for an exploded diagram of the microphone and its attachment hardware.

Step 4 Disconnect the microphone from the audio/video expansion unit, route the cable through the table top section, and remove the microphone.

Step 5 Remove the privacy panel from the table top section to be replaced.

Tip See Chapter 6, "Building the Table Assembly" for exploded drawings of the privacy panels.

Step 6 Remove the screws from the table legs that support the table top section.

Step 7 Move one of the table legs to allow access to the draw bolts.

Note Make sure that the leg still supports both table top sections.

Step 8 Remove the draw bolts between the table top sections on the side that you moved. See Chapter 6, "Building the Table Assembly" for the location of the draw bolts.

Step 9 If required, reposition the table leg so that it fully supports both table sections.

Step 10 Move the table leg on the other side of the table top to allow access to the draw bolts, making sure that the leg still supports both table top sections.

Step 11 Remove the draw bolts between the table top sections on the side that you moved.

Step 12 Separate the table top sections to create a space between the section to be replaced of approximately one inch (2.5 centimeters); this step allows you to remove the splines between the table top sections.

Tip Move the sections to the left and use the space created by the open table door.

Caution Be sure that the legs support all table top sections and do not allow any of the sections to fall.

Step 13 Remove the splines from the slot in the edges of the table top section.

Step 14 Remove the table top section from the table legs.

Step 15 Place the new table top section on the table legs.

Step 16 Place the splines in the slots on the edge of the new table top section.

Step 17 Press the table top sections together.

Step 18 Insert the draw bolts and tighten them between the new table top section and the adjoining table top sections. See Chapter 6, "Building the Table Assembly" for the location of the draw bolts.

Step 19 Attach the legs to the table top sections with the screws. See Chapter 6, "Building the Table Assembly" for the location of the table legs and screw attachment locations.

Step 20 Reconnect the microphone to the new table top section.

Step 21 Route the microphone cable to the codec or audio/video extension unit and connect the cable to the unit.

See Figure 7-2 for microphone installation instructions.

Step 22 Close the table door.

Step 23 If you removed the table door, replace the door.

See Figure 11 for table door installation instructions.

APPENDIX A

Appendix A: Parts List Sorted by Carton

Revised: October 31, 2008, OL-14521-01

Overview

- Each carton may contain multiple parts. Some of these parts are grouped together in kits. Each kit is a smaller box contained within the 'master' carton.
- Each kit box is identified with an ID number.
- If the kit box also contains boxes or bags, each one is identified with an ID number.

Carton List for CTS3K-FUR-MAPLE Table Shelf and Table Section Assemblies

Use this list if your CTS-3000 installation uses display shelves and table sections with a product ID of CTS3K-FUR-MAPLE.

Carton 1 of 47: Mechanical Accessory Kit, CTS3K-ACC-KIT, 53-2855-xx

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1650-02		37-0853-01	3 m Video-to-DVI cable	3	Chapter 8
		37-0901-01	10 m Cat6 Ethernet cable, blue	4	Chapter 7, 8
69-1651-03		37-0848-02	8 m DVI-to-VGA + audio cable	1	Chapter 8
		37-0849-01	Speaker cable	3	Chapter 7, 8
		37-0854-01	6 m video cable	1	Chapter 8
		37-0887-02	3 m Cat6 Ethernet cable, black	5	Chapter 8
		37-0901-01	10 m Cat6 Ethernet cable, blue	4	Chapter 7, 8
69-1656-03		47-21524-01	Compliance sticker for plasma display	3	Chapter 8
		51-4582-02	Cable identification stickers	3	Chapter 8

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		78-17792-02	Cisco TelePresence Meeting Quick Reference document		N/A
		78-17795-02	Cisco TelePresence 3000 Assembly, Use & Care, and Field Replacement Unit Guide (pointer to online document)	1	N/A
		78-17839-04	Regulatory Compliance and Safety Information	1	N/A
		79-0087-02	ESD wrist strap	1	N/A
	69-1694-03	700-23825-03	Table hinge safety strap	1	Chapter 6
		47-21001-01	“Please close” label	1	Chapter 6
		700-26753-01	Cabinet hole covers	14	Chapter 6
	69-1706-xx	48-2313-01	M8 x 30 mm screw	15	
	69-1709-xx	48-1045-01	M4 x 12 mm screws	20	Chapter 7
		49-0735-01	M4 washers	20	Chapter 7
69-1600-xx		700-23807-01	I/O blanks: small	6	Chapter 7
		700-23806-01	I/O blanks: large	2	Chapter 7
		49-0326	M4 nuts	20	Chapter 7
69-1727-xx	69-1673-02	48-0654-01	M4 x 20 mm screws	15	Chapter 2, 7, 8
	69-1728-01	48-1641-01	M4 x 12 mm flathead screws	25	Chapter 6
	69-1657-01	48-2273-01	M8 x 20 mm screws	500	Chapter 2, 3, 4, 5, 6, 7
	69-1661-01	48-2274-01	M8 x 70 mm screws	100	Chapter 2, 4
	69-1660-01	48-2275-01	Half-turn bolt	6	Chapter 7
69-1652-xx	69-1659-xx	49-1165-01	M8 washers	100	Chapter 7
69-1653-xx	69-1662-xx	51-0609-01	Cable tie holders	40	Chapter 8
	69-1663-xx	51-4536-01	Cable ties	40	Chapter 8
	69-1654-01	51-4540-01	Leveling feet	18	Chapter 2, 7
	69-1693-01	700-23981-01	Black buffer strips	2	Chapter 3
69-1863-01		48-2426-01	M4 x 12mm screws, black	10	Chapter 7
69-1813-xx		74-5247-01	Touch-up paint bottle, white	1	Chapter 4
N/A		37-0833-01	3 m Jumper cord	9	Chapter 7, 8
N/A		37-0852-01	2 m Jumper cord	1	Chapter 8
N/A[1]		48-2426-01	M8 x 12 mm screw, black	4	Chapter 7
N/A		68-2433-xx	Cisco IP Phone 7970	1	Chapter 7
N/A		69-1691-01	VGA Module	1	Chapter 7
N/A		74-4743-01	Microphones	3	Chapter 7
N/A		74-4787-01	Power distribution units	5	Chapter 8

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
N/A		74-xxxx-xx	I/O modules: power/Ethernet	6	Chapter 7 Refer to Appendix B for specific part numbers.
69-1630-xx		700-23336-xx	Left accessory cabinet attachment bracket	18	Chapter 5
		700-23337-xx	Right accessory cabinet attachment bracket	18	Chapter 5
800-30442-01		73-11609-02 CTS-AV-EXP	Cisco TelePresence Audio/Video Extension Unit with mounting accessories		Chapter 7

1. These screws are included with the camera hood assembly and are not a separate item.

Carton 2 of 47: Camera Assembly, 800-28487-xx, CTS3K-CAM-CLUST

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
800-28487-xx		68-2900-06	Camera Assembly	1	Chapter 7

Carton 3 of 47: Primary Codec, 800-28191-xx, CTS-CODEC-PRIM

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2897-xx	Primary Codec	1	Chapter 7

Carton 4 of 47: Secondary Codec, 800-28202-xx, CTS-CODEC-SEC

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2898-xx	Secondary Codec	1	Chapter 7

Carton 5 of 47: Secondary Codec, 800-28202-xx, CTS-CODEC-SEC

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2898-xx	Secondary Codec	1	Chapter 7

Carton 6 of 47: Projector, 74-4824-xx, CTS-PRJTR-GEN1

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4824-xx		74-4824-01	Projector	1	Chapter 7

Carton 7 of 47: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	Speaker	1	Chapter 7

Carton 8 of 47: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	Speaker	1	Chapter 7

Carton 9 of 47: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	Speaker	1	Chapter 7

Carton 10 of 47: Power Cord, 37-08xx-xx, PWR-CORD10-xx

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
N/A		37-xxxx-xx	Power cord	6	Chapter 8 Refer to "Appendix B: Region- and Country-Specific Equipment" for specific part numbers.

Carton 11 of 47: Camera Bracket, 69-1627-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1627-xx		700-23346-xx	Camera bracket	1	Chapter 2

Carton 12 of 47: Brackets, 69-1632-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1632-xx		700-23338-xx	Switch bracket, left	1	Chapter 6[1]
		700-23342-xx	Codec attachment brackets	6	Chapter 7
		700-23344-xx	Switch bracket, right	1	Chapter 6[1]
		700-23345-01	Connecting plates	10	Chapter 5, 6
		700-23363-xx	Display tilt bracket	6	Chapter 2
		700-23426-xx	Projector screen clips	4	Chapter 7
		700-23944-xx	Speaker board brackets	12	Chapter 5, 7

[1] These brackets are for an optional Ethernet switch; if you did not order this option, disregard these parts.

Carton 13 of 47: Privacy Panel, Right, 69-1628-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1628-xx		700-23362-xx	Privacy panel: right-wing	1	Chapter 7

Carton 14 of 47: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 15 of 47: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 16 of 47: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 17 of 47: Display Structure Rear Feet, 69-1625-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1625-xx		700-23360-xx	Rear foot stabilizer	6	Chapter 2

Carton 18 of 47: Accessory Cabinet Brackets, 69-1630-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1630-xx		700-23336-xx	Left accessory cabinet attachment bracket	1	Chapter 5
		700-23337-xx	Right accessory cabinet attachment bracket	1	Chapter 5

Carton 19 of 47: Auxiliary Control Unit, CTS-LIGHT-CTRL, 74-5405-01

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		74-5405-01	Auxiliary Control Unit	1	Chapter 7

Carton 20 of 47: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 21 of 47: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 22 of 47: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 23 of 47: Lighting Assembly, 69-1613-xx, CTS3K-LIGHT-STR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1613-xx		700-23756-xx	Reflector transition piece: left	1	Chapter 4
		700-23757-xx	Reflector transition piece: right	1	Chapter 4
		700-23758-xx	Reflector transition piece: corner	1	Chapter 4

Carton 24 of 47: Projector Bracket, 69-1631-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1631-xx		48-1963-01	M6 x 10 mm screws	4	Chapter 7
		700-23824-xx	Projector mounting bracket	1	Chapter 7

Carton 25 of 47: Foam Bumpers, 69-1634-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1634-xx		700-24275-xx	Metal packaging brace	4	Chapter 6
		800-28625-xx	Molded foam bumper	4	Chapter 6

Carton 26 of 47: Lighting Assembly, 69-1612-xx, CTS3K-LIGHT-STR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1612-xx		700-23731-xx	Reflector top: center	1	Chapter 4
		700-23734-xx	Reflector top: top side	2	Chapter 4
		700-23735-xx	Reflector top: end	2	Chapter 4
		700-23737-xx	Light “cup” bracket	2	Chapter 4
		700-23745-xx	Plastic diffuser panel: center	1	Chapter 4
		700-23746-xx	Plastic diffuser panel: ends	2	Chapter 4
		700-23747-xx	Plastic diffuser panel: top right	1	Chapter 4
		700-23748-xx	Plastic diffuser panel: top left	1	Chapter 4
		700-23826-xx	Reflector bottom: center	1	Chapter 4
		700-23827-xx	Reflector bottom: top side	2	Chapter 4
		700-23828-xx	Reflector bottom: end	2	Chapter 4
		700-23896-xx	Metal trim panel: center	1	Chapter 4
		700-23897-xx	Metal trim panel: top side	2	Chapter 4
		700-23898-xx	Metal trim panel: end	2	Chapter 4
		700-24126-xx	Metal trim panel: center 2	1	Chapter 4
		700-24152-xx	Reflector bottom spacer	2	Chapter 4
	69-1619-xx	700-23749-xx	Lighting support brackets	6	Chapter 4
		700-23750-xx	End structure brackets	4	Chapter 4
		700-23899-xx	L-brackets	4	Chapter 4

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		700-23752-xx	Support struts	6	Chapter 4
		700-25050-01	Diffuser Panel braces / H-clips	3	Chapter 4
	69-1615-xx	48-2274-01	M8 x 70 mm screws	10	Chapter 4
		48-2285-01	M8 x 12 mm flat-head screws	10	Chapter 4
		49-1165-01	M8 washers	10	Chapter 4
	69-1657-xx	48-2273-01	M8 x 20 mm screws	50	Chapter 7

Carton 27 of 47: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 28 of 47: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 29 of 47: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 30 of 47: Light Fixture, 74-5362-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5362-xx		74-5362-01	CTS-Light-Fixt	1	Chapter 4

Carton 31 of 47: Light Fixture, 74-5362-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5362-xx		74-5362-01	CTS-Light-Fixt	1	Chapter 4

Carton 32 of 47: Camera Target, 69-1674-xx, CTS-CAM-TOOL

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1674-xx		700-23960-01	Horizontal bar	2	Chapter 7
		700-23961-01	Vertical bar	2	Chapter 7
		700-24320-01	Tabletop camera target: small	1	Chapter 7
		700-24321-01	Cardboard ruler	1	Chapter 7
		700-24323-01	Tabletop camera target: large	1	Chapter 7

Carton 33 of 47: Display Structure Crossbars, 69-1623-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1623-xx		700-23361-xx	Support crossbars	4	Chapter 2

Carton 34 of 47: Privacy Panels, 69-1629-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1629-xx		700-23332-xx	Privacy panel: center-right	1	Chapter 7
		700-23333-xx	Privacy panel: center-left	1	Chapter 7
		700-23334-xx	Privacy panel: center	1	Chapter 7

Carton 35 of 47: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 36 of 47: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 37 of 47: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 38 of 47: Spare Fluorescent Bulbs for Light Fixture, 74-5232-01, CTS-3000-SPR-BULBS

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5232-01		95-9611-01	Spare lights for light fixture	1	Chapter 4

Carton 39 of 47: Projector Screen, 74-5416-xx, CTS3K-SCREEN

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5416-xx			Projector screen assembly	1	Chapter 7[1]

[1] Refer to the installation guide that is packaged with the assembly to install the projector screen.

Carton 40 of 47: Display Shelves and Codec Tray, 69-1626-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1626-xx		700-23339-xx	Display shelf support left	3	Chapter 2
		700-23340-xx	Display shelf support right	3	Chapter 2
		700-23341-xx	Codec safety tray	3	Chapter 2

Carton 41 of 47: Tabletop Leg Base, 69-1620-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1620-xx	69-1636-xx	700-23305-01	I/O Module Cover plate	1	Chapter 7
		800-28454-xx	Tabletop leg base	3	Chapter 6
		800-28628-xx	Tabletop leg base, left	1	Chapter 6

Carton 42 of 47: Accessory Cabinet, 69-1637-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1637-xx		700-23601-xx	Accessory cabinet	1	Chapter 5, 6

Carton 43 of 47: Accessory Cabinet, 69-1637-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1637-xx		700-23601-xx	Accessory cabinet	1	Chapter 5, 6

Carton 44 of 47: Tabletop, 69-1638-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1638-xx		700-23594-xx	Tabletop section: center-right	1	Chapter 6
		700-23595-xx	Tabletop section: center	1	Chapter 6
		700-23596-xx	Tabletop section: center-left	1	Chapter 6
	53-2904-02	700-23909-01	Wooden biscuits	24	Chapter 5, 6
		51-4539-01	Left tabletop hinge	2	Chapter 6
		51-4579-01	Cam lock rods	12	Chapter 5, 6
		51-4580-01	Cam lock coupling	20	Chapter 5, 6

Carton 45 of 47: Tabletop, 69-1639-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1639-xx		700-23593-xx	Tabletop section: right-wing	1	Chapter 6
		700-23597-xx	Tabletop section: left door	1	Chapter 6

Carton 46 of 47: Display Shelf, 69-1640-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1640-xx		700-23598-xx	Display shelf section: right	1	Chapter 3, 5
		700-23599-xx	Display shelf section: center	1	Chapter 3, 5
		700-23600-xx	Display shelf section: left	1	Chapter 3, 5

Carton 47 of 47: Speaker Boards, 69-1641-xx, CTS3K-FUR-MAPLE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1641-xx		700-23602-xx	Speaker boards left and right	2	Chapter 7
		700-23603-xx	Speaker board center	1	Chapter 7

Carton List for CTS3K-M Table Shelf and Table Section Assemblies

Use this list if your CTS-3000 installation uses display shelves and table sections with a product ID of CTS3K-M.

Carton 1 of 44: Mechanical Accessory Kit, CTS3K-ACC-KIT, 53-2855-xx

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1650-02		37-0853-01	3 m Video-to-DVI cable	3	Chapter 8
		37-0901-01	10 m Cat6 Ethernet cable, blue	4	Chapter 7, 8
69-1651-03		37-0848-02	8 m DVI-to-VGA + audio cable	1	Chapter 8
		37-0849-01	Speaker cable	3	Chapter 7, 8

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		37-0854-01	6 m video cable	1	Chapter 8
		37-0887-02	3 m Cat6 Ethernet cable, black	5	Chapter 8
		37-0901-01	10 m Cat6 Ethernet cable, blue	4	Chapter 7, 8
69-1656-03		47-21524-01	Compliance sticker for plasma display	3	Chapter 8
		51-4582-02	Cable identification stickers	3	Chapter 8
		78-17792-02	Cisco TelePresence Meeting Quick Reference document		N/A
		78-17795-02	Cisco TelePresence 3000 Assembly, Use & Care, and Field Replacement Unit Guide (pointer to online document)	1	N/A
		78-17839-04	Regulatory Compliance and Safety Information	1	N/A
		79-0087-02	ESD wrist strap	1	N/A
	69-1694-03	700-23825-03	Table hinge safety strap	1	Chapter 6
		47-21001-01	“Please close” label	1	Chapter 6
		700-26753-01	Cabinet hole covers	14	Chapter 6
	69-1706-xx	48-2313-01	M8 x 30 mm screw	15	
	69-1709-xx	48-1045-01	M4 x 12 mm screws	20	Chapter 7
		49-0735-01	M4 washers	20	Chapter 7
69-1600-xx		700-23807-01	I/O blanks: small	6	Chapter 7
		700-23806-01	I/O blanks: large	2	Chapter 7
		49-0326-01	M4 nuts	20	Chapter 7
69-1727-xx	69-1673-02	48-0654-01	M4 x 20 mm screws	15	Chapter 2, 7, 8
	69-1728-01	48-1641-01	M4 x 12 mm flathead screws	25	Chapter 6
	69-1657-01	48-2273-01	M8 x 20 mm screws	500	Chapter 2, 3, 4, 5, 6, 7
	69-1661-01	48-2274-01	M8 x 70 mm screws	100	Chapter 2, 4
	69-1660-01	48-2275-01	Half-turn bolt	6	Chapter 7
69-1652-xx	69-1659-xx	49-1165-01	M8 washers	100	Chapter 7
69-1653-xx	69-1662-xx	51-0609-01	Cable tie holders	40	Chapter 8
	69-1663-xx	51-4536-01	Cable ties	40	Chapter 8
	69-1654-01	51-4540-01	Leveling feet	18	Chapter 2, 7
	69-1693-01	700-23981-01	Black buffer strips	2	Chapter 3
69-1863-01		48-2426-01	M4 x 12mm screws, black	10	Chapter 7
69-1813-xx		74-5247-01	Touch-up paint bottle, white	1	Chapter 4
N/A		37-0833-01	3 m Jumper cord	9	Chapter 7, 8
N/A		37-0852-01	2 m Jumper cord	1	Chapter 8
N/A[1]		48-2426-01	M8 x 12 mm screw, black	4	Chapter 7

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
CP-7975G-CTS		68-3309-01	Cisco IP Phone 7975G	1	Chapter 7
N/A		69-1691-01	VGA Module	1	Chapter 7
N/A		74-4743-01	Microphones	3	Chapter 7
N/A		74-4787-01	Power distribution units	5	Chapter 8
N/A		74-xxxx-xx	I/O modules: power/Ethernet	6	Chapter 7 See "Appendix B: Region- and Country-Specific Equipment" for specific part numbers.
N/A		N/A	Spline		Chapter 5, 6
N/A		N/A	Draw bolt		Chapter 5, 6

1. These screws are included with the camera hood assembly and are not a separate item.

Carton 2 of 44: Camera Assembly, 800-28487-xx, CTS3K-CAM-CLUST

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
800-28487-xx		68-2900-06	Camera Assembly	1	Chapter 7

Carton 3 of 44: Primary Codec, 800-28191-xx, CTS-CODEC-PRIM

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2897-xx	Primary Codec	1	Chapter 7

Carton 4 of 44: Secondary Codec, 800-28202-xx, CTS-CODEC-SEC

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2898-xx	Secondary Codec	1	Chapter 7

Carton 5 of 44: Secondary Codec, 800-28202-xx, CTS-CODEC-SEC

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
53-2907-01		48-1962-01	M5 x 12 mm screws	2	Chapter 7
		700-23449-xx	Cable management bar	1	Chapter 7
N/A		68-2898-xx	Secondary Codec	1	Chapter 7

Carton 6 of 44: Projector, 74-4824-xx, CTS-PRJTR-GEN1

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4824-xx		74-4824-01	Projector	1	Chapter 7

Carton 7 of 44: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	High-Fidelity Loudspeaker	1	Chapter 7

Carton 8 of 44: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	High-Fidelity Loudspeaker	1	Chapter 7

Carton 9 of 44: Speaker, 74-4740-xx, CTS-LDSPKR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4740-xx		74-4740-01	High-Fidelity Loudspeaker	1	Chapter 7

Carton 10 of 44: Power Cord, 37-08xx-xx, PWR-CORD10-xx

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
N/A		37-xxxx-xx	Power cord	5	Chapter 8 See "Appendix B: Region- and Country-Specific Equipment" for specific part numbers.

Carton 11 of 44: Camera Assembly Bracket, 69-1627-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1627-xx		700-23346-xx	Camera assembly bracket	1	Chapter 2

Carton 12 of 44: Brackets, 69-1632-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1632-xx		700-23338-xx	Switch bracket, left	1	Chapter 6[1]
		700-23342-xx	Codec attachment brackets	6	Chapter 7
		700-23344-xx	Switch bracket, right	1	Chapter 6[1]
		700-23345-01	Connecting plates	10	Chapter 5, 6
		700-23363-xx	Display tilt bracket	6	Chapter 2
		700-23426-xx	Projector screen clips	4	Not used
		700-23944-xx	Speaker board brackets	12	Chapter 5, 7

[1] These brackets are for an optional Ethernet switch; if you did not order this option, disregard these parts.

Carton 13 of 44: Privacy Panel, Right, 69-1628-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1628-xx		700-23362-xx	Privacy panel: right-wing	1	Chapter 7

Carton 14 of 44: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 15 of 44: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 16 of 44: Front Foot Stabilizer, 69-1624-xx, CST3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1624-xx		700-23359-xx	Front foot stabilizer	2	Chapter 2

Carton 17 of 44: Display Structure Rear Feet, 69-1625-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1625-xx		700-23360-xx	Rear foot stabilizer	6	Chapter 2

Carton 18 of 44: Accessory Cabinet Brackets, 69-1630-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1630-xx		700-23336-xx	Left accessory cabinet attachment bracket	1	Chapter 5
		700-23337-xx	Right accessory cabinet attachment bracket	1	Chapter 5

Carton 19 of 44: Auxiliary Control Unit, CTS-LIGHT-CTRL, 74-5405-01

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		74-5405-01	Auxiliary Control Unit	1	Chapter 7

Carton 20 of 44: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 21 of 44: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 22 of 44: Plasma Display, 74-4881-xx, CTS-DISP-65-GEN2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-4605-xx		74-4605-xx	65-inch high-definition display	1	Chapter 3

Carton 23 of 44: Lighting Assembly, 69-1612-xx, CTS3K-LIGHT-STR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1612-xx		700-23731-xx	Reflector top: center	1	Chapter 4
		700-23734-xx	Reflector top: top side	2	Chapter 4
		700-23735-xx	Reflector top: end	2	Chapter 4
		700-23737-xx	Light “cup” bracket	2	Chapter 4
		700-23745-xx	Plastic diffuser panel: center	1	Chapter 4
		700-23746-xx	Plastic diffuser panel: ends	2	Chapter 4
		700-23747-xx	Plastic diffuser panel: top right	1	Chapter 4
		700-23748-xx	Plastic diffuser panel: top left	1	Chapter 4
		700-23826-xx	Reflector bottom: center	1	Chapter 4
		700-23827-xx	Reflector bottom: top side	2	Chapter 4
		700-23828-xx	Reflector bottom: end	2	Chapter 4
		700-23896-xx	Metal trim panel: center	1	Chapter 4
		700-23897-xx	Metal trim panel: top side	2	Chapter 4
		700-23898-xx	Metal trim panel: end	2	Chapter 4
		700-24126-xx	Metal trim panel: center 2	1	Chapter 4
		700-24152-xx	Reflector bottom spacer	2	Chapter 4
	69-1619-xx	700-23749-xx	Lighting support brackets	6	Chapter 4
		700-23750-xx	End structure brackets	4	Chapter 4
		700-23899-xx	L-brackets	4	Chapter 4
		700-23752-xx	Support struts	6	Chapter 4
		700-25050-01	Diffuser Panel braces / H-clips	3	Chapter 4
	69-1615-xx	48-2274-01	M8 x 70 mm screws	10	Chapter 4
		48-2285-01	M8 x 12 mm flat-head screws	10	Chapter 4
		49-1165-01	M8 washers	10	Chapter 4
	69-1657-xx	48-2273-01	M8 x 20 mm screws	50	Chapter 7

Carton 24 of 44: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 25 of 44: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 26 of 44: Light Fixture, 74-5361-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5361-xx		74-5361-01	CTS-Light-Fixt	1	Chapter 4

Carton 27 of 44: Light Fixture, 74-5362-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5362-xx		74-5362-01	CTS-Light-Fixt	1	Chapter 4

Carton 28 of 44: Light Fixture, 74-5362-xx, CTS-LIGHT-FIXT

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5362-xx		74-5362-01	CTS-Light-Fixt	1	Chapter 4

Carton 29 of 44: Camera Target, 69-1674-xx, CTS-CAM-TOOL

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1674-xx		700-23960-01	Horizontal bar	2	Chapter 7
		700-23961-01	Vertical bar	2	Chapter 7
		700-24320-01	Tabletop camera target: small	1	Chapter 7
		700-24321-01	Cardboard ruler	1	Chapter 7
		700-24323-01	Tabletop camera target: large	1	Chapter 7

Carton 30 of 44: Display Structure Crossbars, 69-1623-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1623-xx		700-23361-xx	Support crossbars	4	Chapter 2

Carton 31 of 44: Privacy Panels, 69-1629-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1629-xx		700-23332-xx	Privacy panel: center-right	1	Chapter 7
		700-23333-xx	Privacy panel: center-left	1	Chapter 7
		700-23334-xx	Privacy panel: center	1	Chapter 7

Carton 32 of 44: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 33 of 44: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 34 of 44: Display Structure, 69-1622-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1622-xx		700-23358-xx	Display structure	1	Chapter 2

Carton 35 of 44: Spare Fluorescent Bulbs for Light Fixture, 74-5232-xx, CTS-3000-SPR-BULBS

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5232-01		95-9611-01	Spare lights for light fixture	1	Chapter 4

Carton 36 of 44: Projector Screen, 74-5416-xx, CTS3K-SCREEN

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5416-xx			Projector screen assembly	1	Chapter 7[1]

[1] Refer to the installation guide that is packaged with the assembly to install the projector screen.

Carton 37 of 44: Accessory Cabinet, Right, 69-1837-xx, CTS3K-M-TABLE-G2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1837-01		74-5297-01	Accessory cabinet, Right	1	Chapter 5, 6

Carton 38 of 44: Accessory Cabinet, Left, 69-1838-xx, CTS3K-M-TABLE-G2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1838-01		74-5298-01	Accessory cabinet, Left	1	Chapter 5, 6

Carton 39 of 44: Display Shelf Supports and Codec Tray, 69-1626-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1626-xx		700-23339-xx	Display shelf support left	3	Chapter 2

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
		700-23340-xx	Display shelf support right	3	Chapter 2
		700-23341-xx	Codec safety tray	3	Chapter 2

Carton 40 of 44: Tabletop Leg Base, 69-1620-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1620-xx	69-1636-xx	700-23305-01	I/O Module Cover plate	1	Chapter 7
		800-28454-xx	Tabletop leg base	3	Chapter 6
		800-28628-xx	Tabletop leg base, left	1	Chapter 6

Carton 41 of 44: Lighting Assembly, 69-1613-xx, CTS3K-LIGHT-STR

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1613-xx		700-23756-xx	Reflector transition piece: left	1	Chapter 4
		700-23757-xx	Reflector transition piece: right	1	Chapter 4
		700-23758-xx	Reflector transition piece: corner	1	Chapter 4

Carton 42 of 44: Projector Bracket, 69-1631-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1631-xx		48-1963-01	M6 x 10 mm screws	4	Chapter 7
		700-23824-xx	Projector mounting bracket	1	Chapter 7

Carton 43 of 44: Foam Bumpers, 69-1634-xx, CTS3K-STRUCTURE

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
69-1634-xx		700-24275-xx	Metal packaging brace	4	Chapter 6
		800-28625-xx	Molded foam bumper	4	Chapter 6

Carton 44 of 44: Tabletop Sections, Display Shelves, and Speaker Boards, 69-1835-01, CTS3K-M

Kit ID Number	Sub-Kit ID Number	Part Number	Part Description	Qty	Chapter Parts List Reference
74-5299-01		95-9686-01	Tabletop section: Center	1	Chapter 6
74-5300-01		95-9687-01	Tabletop section: Center right	1	Chapter 6
74-5301-01		95-9689-01	Tabletop section: Center left	1	Chapter 6
74-5302-01		95-9690-01	Tabletop section: Right wing	1	Chapter 6
74-5303-01		95-9691-01	Tabletop section: Left door	1	Chapter 6
74-5304-01		95-9692-01	Display shelf section: Left	1	Chapter 5
74-5305-01		95-9693-01	Display shelf section: Right	1	Chapter 5
74-5306-01		95-9694-01	Display shelf section: Center	1	Chapter 5
74-5309-01		95-9697-01	Accessory Kit for Tabletops	1	Chapter 5, 6, 7
69-1836-01		74-5307-01	Speaker board center	1	Chapter 7
		74-5544-01	Speaker boards left and right	2	Chapter 7

APPENDIX **B**

Appendix B: Region- and Country-Specific Equipment

Revised: October 31, 2008, OL-14521-01

The following countries and regions have equipment manufactured to local regulations:

Asia Pacific

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-AP 37-0831-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-AP 74-4861-01	6	

Argentina

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-AR 37-0841-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-AR 74-4866-01	6	

Australia

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-AU 37-0840-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-AU 74-4866-01	6	

Central Europe

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-CE 37-0832-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-CE 74-4865-01	6	

China

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-CN 37-0837-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-CN 74-4914-01	6	

India, UAE, South Africa

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-ID 37-0838-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-ID 74-4864-01	6	

Israel

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-ISR 37-0842-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-ISR 74-4863-01	6	

Italy

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-ITA 37-0832-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-ITA 74-4865-01	6	

Japan

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-JP 37-0847-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-JP 74-4951-01	6	

North America

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-NA 37-0847-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-NA 74-4868-01	6	

Switzerland

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-SWI 37-0843-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-SWI 74-4862-01	6	

United Kingdom

Part Description	Part Number	Qty	Notes
TelePresence Power Cord	PWR-CORD10-UK 37-0831-01	6	
I/O modules: power/Ethernet	CTS-LAPCONN-UK 74-4861-01	6	